The Illinois Medical Journal

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Official Journal of the Illinois State Medical Society

EDITOR — Harold M. Camp. EDITORIAL BOARD — James H. Hutton, Chairman, Frederick H. Falls, Josiah J. Moore, Edwin M. Miller, Chauncey C. Maher, Harry S. Gradle, Harry Culver, Walter Stevenson, Raymond W. McNealy.

Editorials

THE 1948 ANNUAL MEETING

The 1948 Annual Meeting was held at the Palmer House, Chicago, on May 10-12. Although weather conditions were bad with daily rains during the meeting, the attendance was quite satisfactory, and the programs were well received. The threatened railroad strike likewise was a factor which had some effect on attendance, as those members from the down-state areas were uncertain as to whether or not the railroads would be operating when they were ready to return home from the meeting.

The Red Lacquer room, as usual, was completely filled with excellent scientific exhibits, and there were a number in the foyer outside likewise of great interest to those attending the meeting. For the first time, an actual count was made of those viewing the scientific exhibits, the final count being 4,450, this not including technical or scientific exhibitors, and non-medical people. It was a most difficult task for the secret committee on awards to make a final decision as all of the exhibits were of unusual interest.

The large exhibition hall was filled with technical exhibits which had been carefully selected and were well attended throughout the meeting. Another innovation this year was the motion picture theater where excellent scientific films were displayed throughout the day, and the attendance here likewise, was excellent. This feature will most likely become a regular feature at the annual meetings, judging from the interest which was shown this year.

The scientific meetings were conducted in the large Grand Ballroom and the attendance throughout the meeting was most gratifying to those who had labored hard to arrange the programs. Section meetings were of half day duration for the few sections desiring to have such a session, and they were arranged so they would cause but little, if any effect on the general assembly sessions.

The Annual Dinner on Tuesday evening was well attended and a very interesting program was presented. The past-presidents were introduced with only one of them missing. The President's Certificate was presented to Dr. Irving H. Neece by the Chairman of the Council, Walter Stevenson who made appropriate remarks concerning the activities of Doctor Neece during the past year. During this dinner session, the announcement of awards for outstanding scientific exhibits of the two general classes, was made by John A. Mart, Director of Scientific Exhibits.

The Society was honored by the presence of Dr. R. L. Sensenich, President-Elect of the American Medical Association, and by officers of adjoining State Medical Societies. The principal address was made by Dr. Franklyn Bliss Snyder, President of Northwestern University, his subject "Business and Higher Education". Dr. Snyder, a most interesting speaker, spoke

highly of the medical profession and told of his interest in the professional schools of his own, as well as those of other universities. It was quite obvious from the attention given to the speaker, and from many complimentary remarks following the talk, that this was one of the best addresses which has ever been presented at the Annual Dinner.

The two meeting of the House of Delegates on Monday afternoon and Wednesday morning were well attended. Much business was transacted by this Body at the two sessions. Reports were referred to reference committees at the first session, hearings were conducted, and reports were presented at the second meeting, and acted upon by the House.

Following the close of the business session on Wednesday morning, Dr. Percy E. Hopkins of Chicago was inducted into the office of President of the Society by Irving H. Neece. Dr. Hopkins gave assurance to the assembly that he desires to carry on during the coming year to the best of his ability and asked for the cooperation of the Society membership as a whole.

The following were elected at the second meeting of the House of Delegates;

Walter Stevenson, President-Elect, Quincy

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Fred Muller, Second Vice-President, Chicago

Harold M. Camp, Secretary-Treasurer, Monmouth

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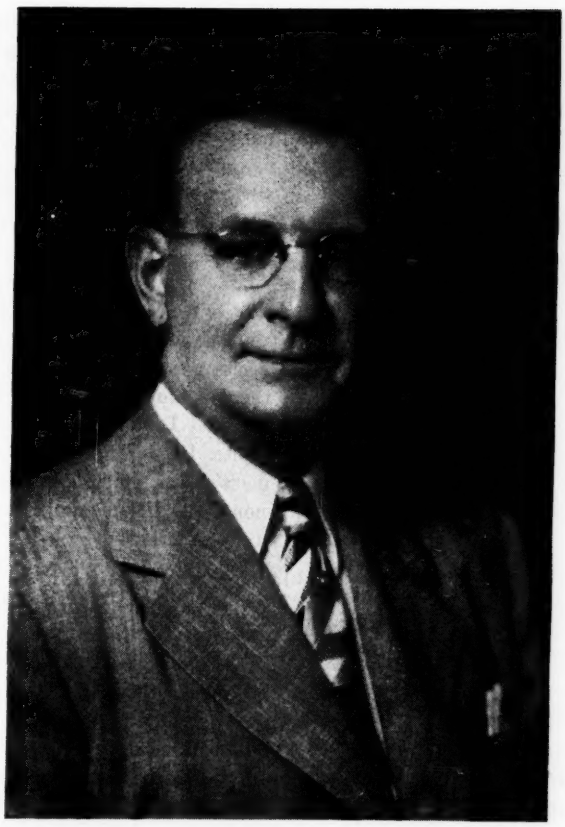

Percy E. Hopkins, M. D.

President, Illinois State Medical Society

1948-1949

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Election of Standing Committees
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Committee on Medical Education and Hospitals
Willard O. Thompson, Chicago
Committee on Medical Benevolence
Oscar Hawkinson, Oak Park
Committee on Medical Testimony
Oscar Hawkinson, Chairman, Oak Park for four years
Everett P. Coleman, Canton, for four years
Warren W. Furey, Chicago, for three years
W. J. Gillesby, Effingham, for three years
Walter L. Palmer, Chicago, for two years
Arthur F. Goodyear, Decatur, for two years
Harry A. Oberhelman, Chicago, for one year
E. H. Weld, Rockford, for one year.
Committee on Archives
Josiah J. Moore, Secretary, Chicago

The meeting place for the 1949 annual meeting was left to the decision of the Council after a thorough investigation of cities in Illinois where an annual meeting can be held.

The total registration at the meeting was approximately 3,300 and the physician registration was 2,400. All local committees in Chicago are to be congratulated for all local arrangements and especially for the efforts made to see that everything was arranged to the best advantage of all those who attended the meeting. Drs. R. C. Oldfield, and M. M. Hoeltgen, as Chairman and Vice Chairman of the Committee on Arrangements carried on their respective functions most satisfactorily during the many months preceding the meeting in order that everything possible would be done to insure a successful annual meeting.

The many fine papers which were presented during the annual meeting will be published in the Illinois Medical Journal in coming months, and they will no doubt be of much interest to our readers. At the close of the second meeting of the House of Delegates, the Secretary was instructed to give the thanks of the Society as a whole for the unusually fine annual meeting of 1948.

SCIENTIFIC EXHIBIT AWARDS

The Committee on Awards at the 1948 annual meeting faced a difficult task when they reviewed the outstanding scientific exhibits assembled in the Red Lacquer Room, by the Director of Exhibits, Dr. John A. Mart of Chicago. The final decision of the Committee on Awards was announced at the annual dinner on Tuesday evening as follows:

1. For Original Work:

GOLD MEDAL: "Heparinemia and Hemorrhia"
Exhibitor: J. Garrott Allen, C. McKeen, R. Elghammer,
M. Sanderson, W. Egner, Burt Grossman, J. Crosbie.
Institution: Department of Surgery, University of Chicago School of Medicine

SILVER MEDAL: "A New Concept of the Paraurethral Glands"
Exhibitor: John W. Huffman
Institution: Northwestern University Medical School

BRONZE MEDAL: "Wounds of the Heart. A new Experimental Method for Control of Hemorrhage"
Exhibitors: Howard Reiser, David S. Fox, Rudolph Janda, Hilger Perry Jenkins
Institutions: University of Illinois College of Medicine, Woodlawn Hospital, Chicago

BRONZE MEDAL: "Radioactive Isotopes. Index of Circulation in Peripheral Vascular Disease"

Exhibitors: Morris T. Friedell, Fenton Schaffner, and William Pickett

Institution: Hektoen Institute for Medical Research of Cook County Hospital

BRONZE MEDAL: "Inhalation of Penicillin Dust"

Exhibitors: Louis Krasno, Mary Karp, Paul S. Rhoads

Institutions: Northwestern University Medical School, University of Illinois College of Medicine

2. For Educational Value:

GOLD MEDAL: "Amino Acids in Clinical Medicine"

Exhibitors: Karl A. Meyer, Donald D. Kozoll, William S. Hoffman, Frederick Steigmann and Hans Popper

Institution: Hektoen Institute for Medical Research of the Cook County Hospital

SILVER MEDAL: "Breech Presentation"

Exhibitor: Frederick H. Falls and Charlotte S. Holt

Institutions: University of Illinois College of Medicine; State Department of Public Health

BRONZE MEDAL: "Antihistamine Drugs"

Exhibitors: Samuel M. Feinberg, Theodore B. Bernstein, Alan R. Feinberg, Sidney Friedlaender

Institution: Northwestern University Medical School

BRONZE MEDAL: "Cancer Diagnosis in a Small Community Hospital"

Exhibitors: Bernard M. Chapman, Isadore Pilot

Institution: Edgewater Hospital, Chicago

BRONZE MEDAL: "Congenital Cystic Malformation of the Lung. Pathologic Characteristics and Differential Diagnosis"

Exhibitors: W. E. Adams and James M. Fritz

Institution: Department of Surgery, University of Chicago School of Medicine

All exhibits which were shown at the meeting deserved special attention and commendation. It was the general impression of most of those at the meeting that this was the finest array of scientific exhibits ever assembled for an annual meeting of the Illinois State Medical Society.

Once more it was brought out forcibly that the scientific exhibits are one of the highlights of the present day medical meeting.

NATIONAL CONFERENCE OF COUNTY MEDICAL SOCIETY OFFICERS

County medical society officers are invited to participate in three panel discussions on "The Job of The County Medical Society" on June 20, at the Palmer House, Chicago.

PROGRAM

9:30 a. m.

Registration

Call to Order: A. M. Mitchell, M.D.
Chairman, Terre Haute, Indiana

Address of Welcome: E. L. Henderson, M.D.
Chairman, Board of Trustees, A.M.A.
Louisville, Kentucky

10:00 a. m.

I. The County Medical Society—Its Part in Medical Organization
- A. Relation to the State Medical Association
- B. Relation to the American Medical Association
- C. Relation to Other Medical Organizations—N.P.C., A.A.P.S., Blue Cross, A.M.C.P., Academy of General Practice, etc.

Discussant: F. J. Holroyd, M.D.
Princeton, West Virginia

Question and Answer Period

11:00 a. m.

II. The County Medical Society—Its Responsibility to the Membership
- A. Organization Responsibilities
  1. Membership—Selection and Maintenance
  2. Censorship—Maintaining Ethics
  3. Hospital Relations

Discussant: T. J. Danaher, M.D.
Torrington, Connecticut

- B. Scientific Programming

Discussant: C. J. Milling, M.D.
Columbia, South Carolina

- C. Fellowship and Business
  1. Social Functions—Golf, Bowling, Parties
  2. Business Aids—Credit and Collection, Telephone Answering Service, etc.

Discussant: C. L. Mulfinger, M.D.
Los Angeles, California

Question and Answer Period

12:30 p. m.

Luncheon (Subscription)
Prominent Speaker on "National Medical Emergency"

2:00 p. m.

III. The County Medical Society—Its Responsibility to the Public

A. Medical Care—Serving the Public

1. Pay Patients
2. Medically Indigent
3. Indigent—Government Clients

Discussant: D. B. Wiley, M.D.
Utica, Michigan

B. Community Agencies

1. Special Programs—Participation in Cancer, Tuberculosis, Heart, etc. programs
2. Community Chest—The Place of the Medical Profession in the Drives for Funds
3. Health Councils—The Function of the Medical Society

Discussant: B. O. Mork, Jr., M.D.
Worthington, Minnesota

C. Newspapers, Radio, Industry, and Labor

Discussant: W. Andrew Bunten, M.D.
Cheyenne, Wyoming

D. Legislative-Political Responsibilities of the County Medical Society

Discussant: R. B. Robins, M.D.
Camden, Arkansas

Question and Answer Period

TRACE SOME BEHAVIOR DISORDERS TO SLEEPING SICKNESS

A definite relationship between some childhood behavior problems and encephalitis is shown by Drs. J. Victor Greenebaum and Louis A. Lurie in an article in the April 3 issue of The Journal of the American Medical Association.

In a study of 78 children who were referred to the Child Guidance Home at Cincinnati, O., Drs. Greenebaum and Lurie conclude that many behavior disorders afflicting the children can be traced to encephalitis, occurring as a complication of other diseases, usually during the first ten years of life.

"From our experience," the physicians state in the article, "we feel that the disease, as a complication of acute infectious and contagious diseases of children, is frequently overlooked."

"One of the reasons," they continue, is that "the neurologic examination often fails to disclose any abnormality. Another reason, and probably a more potent one, is the fact that in the great majority of cases there is no history of an attack of encephalitis."

According to the article, several different, and quite varied, types of behavior disorders may follow encephalitis.

Sometimes there are the simpler disturbances, common to any youngster, such as temper tantrums, running-away or lying.

In other instances, however, the children under observation showed the more violent symptoms of screaming outbursts, irrelevant talk, viciousness, cruelty and hallucinations.

They point out, however, that progress is being made in the efforts to diagnose encephalitis, even without knowing much about its cause or essential nature.

The possibility of encephalitis must be considered the article states, when "confronted with a child who is extremely hyper-active, restless and destructive, has a short attention span, is highly distractible, lacks self-confidence and whose actions are extremely unpredictable."

The article is the third report of a continuous study of the relation of encephalitis to behavior problems in children.

In some cases, the study covered a 25-year period and involved research and understanding of all the physical, psychiatric, psychologic and sociologic factors governing a given history.

As to remedies for children whose behavior disorders are associated with encephalitis, the physicians sound a somewhat discouraging note.

Of the 78 children under observation, they state, only 12 have thus far made a fair social adjustment, despite the best medical, psychiatric and social therapy.

This, they conclude, is because the symptoms are primarily the result of changes in the nervous system — changes which, at present, are unable to correct.

Medical Economics

The Medical Economics Committee — Chauncey C. Maher, Chmn., 6 North Michigan Avenue, Chicago, Edwin S. Hamilton, V. Thomas Austin, Emmet B. Bay, Jay McDonald Milligan, George Halperin, Marie Wessels, Thomas C. Browning, Roland R. Cross, Milton E. Bitter, Edwin F. Hirsch, Ford Hick, Carroll C. L. Birch, Hubert L. Allen.

MEDICAL CARE OF THE RECIPIENTS OF THE ILLINOIS PUBLIC AID COMMISSION

As most of the younger members of the profession have entered the practice of medicine without having gone through the trying days of the Illinois Emergency Relief Commission, they are unaware of the background of reasons leading up to the need of a Medical Advisory Committee to the Illinois Public Aid Commission.

During the depression of 1933 to 1938 widespread unemployment increased the doctor's charity load until it became beyond his ability to carry it. As a result, the doctors were inclined to welcome the Illinois Emergency Relief Commission plan which did pay some of the bills for services which otherwise would have been unpaid. During this period of time, the doctors had the same volume of work and the same overhead of expenses but decidedly curtailed incomes. In fact, many of them had to borrow on their insurance policies to pay their insurance premiums so under these circumstances, any additional income was more than welcome. The I.E.R.C. funds were limited, particularly for medical purposes, although additional funds were available for playground work, for teaching women how to sew, and teaching farmers how to plant gardens, as well as other less essential things. The program was by no means under medical control, it was entirely in the hands of non-medical people, many of them brought in from New York City and some from Chicago and sent to rural districts where they had no knowledge of the psychology of the citizens there and not the slightest knowledge of or sympathy with local circumstances. Some of them were decidely anti-medical in their attitudes and this created many problems which do not exist at the present time. The doctors could not really furnish adequate treatment because they were limited in the things they could do and the types of cases they could treat. All cases were supposed to be acute, and all surgical cases were presumed to be only emergencies. The fee in many parts of the state for emergency surgery of any type was a maximum of twenty-five dollars. The funds, being limited, usually ran out about the 18th or 20th of the month and any work done thereafter was unpaid. If a doctor treated a patient in the country over mud roads for pneumonia and had to see that patient at least once a day with his first call perhaps on the 18th of the month, he might get paid for the first visit; but the other visits, coming after the funds ran out, had to be furnished without any recompense. On the other hand, if he saw the patient the first of the month, he was able to get pay until the patient either recovered or the funds ran out about the 18th. It was noted that almost all the emergency surgery occurred from the 1st to the 15th of each month, and thereafter very little of it was found. As these problems were being slowly ironed out, the plan was discontinued. One reason being that the country had gotten into a wartime prosperity of making munitions for Europe before we became involved in a shooting war.

The Old Age Pension Act became a law in the latter part of the 1930's and as this included funds for medical care, it was forced upon the

attention of the medical profession which had to render that care. As a result of difficulties in carrying out the medical care provisions of this law, in December 1940 the administrators of the Old Age Pension Act asked for an Advisory Committee to be appointed by the Illinois State Medical Society to help in developing a program within the limitations of the Act. In September 1941, a program had been partially arranged and County Medical Society Advisory Committees were appointed to work with County Departments of Public Assistance. In March 1942, the program was under way but was limited in scope because the funds were also quite limited and the amount that could be paid was under a rather low ceiling. As a result, local relief authorities were frequently called upon to supplement the funds and as many of them were not working in harmony with this new department, these supplemental funds were often quite difficult to obtain. In June 1943, the Illinois Public Aid Commission combined general relief, aid to dependent children, blind assistance and old age assistance under one group, and since that time have definitely increased the efficiency of their work. In July 1945, the Rennick-Laughlin bills provided for conversion of county poor farms into nursing homes for the chronically ill, and had these places also open to the general public needing similar care who wished to pay for it. In January 1946, the commission approved an increase in cost standards for hospital care to 90% of the reimbursable rate, and in September 1946, the commission authorized direct payment for hospital bills and terminal illnesses.

PLAN OF CARE:

The general plan of this care was that if a recipient of one of these subdivisions of the Public Aid Commission was in need of medical care, he was to call the physician of his choice, receive treatment as a private citizen, and then the doctor was to submit a bill for services rendered. In the early days, the doctor was supposed to anticipate for a year in advance the medical needs of the patient and it was some time before the advisory committee could get this changed to a more sensible plan of payment for services rendered. Then the forms that had to be filled out were in quadruplicate and this caused much difficulty until again, the committee was able to get them reduced to one form which was in reality a statement of account and which simplified the bookkeeping greatly. It was attempted to emphasize throughout this program that it was a limited one and that the funds were sometimes insufficient and therefore a reduced fee schedule was necessary. The committee met with the officers of the various county medical societies in councilor districts and finally this plan was approved through the House of Delegates.

The original fees for office call, house call, and night call were $1.00, $1.50, and $2.00. These were changed to $1.50, $2.00 and $3.00 and in addition $5.00 was allowed for a complete examination in cases requiring it where a certain amount of laboratory work was included. In addition $1.00 was allowed for the administration of the ordinary hypodermic medications, or for drugs, and the surgery fee scale was from $5.00 to $25.00 for minor cases and a maximum of $50.00 for major cases. Last year this was changed to from $75.00 to $100.00 with an additional allowance of $10.00 for an assistant, and for an anesthetist, if these are not paid by the hospital. All surgery bills and all bills for unusual drugs, or unusual or prolonged hospitalization now have to be passed upon by the local medical advisory committee to avoid needless hospitalization or over prescribing.

Problems have arisen in reference to certain specialities, particularly x-ray and eye, ear, nose and throat. As a result sub-committees in these specialties have been appointed and they have made their own standards of service rendered and fees which have been approved by the I. P. A. Commission.

The State Advisory Committee tries to limit its functions to that of an advisory board in matters of general policy and it hopes that county committees, with increased experience, will handle all the local problems as they are far better able to do this than the State Committee which is oftentimes too far away from the local problems, but the State Advisory Committee will help County Committees if requested to do so. It has had to take in hand some problems of local abuse in order to get them straightened out, but it is a source of comfort to say that most of the so-called abuses have simply been cases of misunderstanding and have been rather readily corrected.

An increasing number of doctors are asking for a direct payment in the assistance cases and the I.P.A.C. is also in favor of this. Unfortunately, the federal funds are subject to regulations which make direct payment to the recipient mandatory and therefore, payment to the doctor cannot be made directly at the present time. Payment for terminal illness and hospital bills is made directly, but these come from state funds only and are not out of matched federal funds. Since the I.P.A.C. is also in favor of direct payment to the doctor, attempts have been made to introduce bills in congress to make this possible. So far they have been unsuccessful for various reasons, chiefly because of the bills being tacked on to other types of legislation which had objectionable features.

Funds for the present biennium have been reduced and there is the possibility that services may be curtailed at the end of this year. But there is also the possibility that ultimately a liberalization of the program may bring an increase in funds. In any event, the program with its many objectionable features and its numerous weaknesses and drawbacks does furnish pay for medical service to a group of citizens in the state who are becoming increasingly numerous and who are becoming more and more of a medical problem. Also this group is one which would, under other circumstances, be largely dependent upon medical charity.

While the Advisory Committee has been unable to succeed in all it has attempted to accomplish, it has done fairly well in many respects and it feels that it is quite important that any program, regardless of its drawbacks, be kept under medical supervision to protect the interests of both the patients and the profession.

E.P.C.

DOCTORS REPORT SPEEDY TEST FOR SICKLE-CELL ANEMIA

A rapid test to demonstrate the sickling process in blood, whereby the red corpuscles acquire a sickled, or crescent-like shape, is reported by Karl Singer, M.D. and Sidney Robin, M.D., in the April 17 issue of The Journal of the American Medical Association.

The two doctors are from the Department of Hematologic Research and the Kunstadter Laboratory for Pediatric Research, Michael Reese Hospital, Chicago.

Sickle cell anemia, which results from the sickling phenomenon, is, in the words of the authors, "a great masquerader," manifesting itself in several different ways. Often, according to the article, sickle cell anemia may be confused with perforated ulcers, rheumatic fever, tuberculosis, or skin and nerve diseases. The disease is confined principally to Negroes and the tendency to it is hereditary.

Because of these diagnostic pitfalls, the authors state that "the need for routine examinations for the sickling phenomenon has been emphasized repeatedly," adding that "particularly in the dramatic surgical conditions a rapid test is urgently needed."

The present methods of examining the sickling process are inadequate according to the authors, because "they do not provide the required information with sufficient rapidity and reliability."

In the rapid test devised by Drs. Robin and Singer, a drop of the suspected blood is mixed with a drop of cloudy broth culture of non-disease-breeding bacteria and then sealed. Thus, according to the article, "the living organisms consume oxygen rapidly and also give off carbon dioxide, . . .creating the most favorable conditions for the detection of sickling tendencies."

"The mechanism on which the test is based," the authors state, "is the rapid reduction of the hemoglobin contained in the corpuscles, which is a necessary requirement for the sickling phenomenon."

State Department of Public Health

COMMUNICABLE DISEASE TRENDS*
1st QUARTER—1948

For the first 13 weeks of 1948, Illinois and the Nation as a whole have been following a similar trend in the incidence of major communicable diseases.

One outstanding exception, however, was the marked increase in the incidence of MEASLES in Illinois, which deviated from its usual 3-year cycle and approached epidemic proportions. Morbidity figures for this disease in the first quarter of 1947 increased from 571 cases to 26,917 for the corresponding period of 1948. An epidemic in measles was not expected this year, since the last peak occurred in 1946 when a total of 25,995 cases was reported.

The incidence of INFLUENZA for this season made a decisive drop below last year. This was expected, since the epidemic of INFLUENZA occurred in the early months of 1947, accounting for the high prevalence in the first quarter of that year. The incidence of influenza for the United States, as compared to Illinois, did not show quite as sharp a rate of decline.

Twenty-eight cases of DIPHTHERIA were reported for the first quarter of this year. This shows a decrease of 26 cases from the corresponding period of 1947. This is the lowest number of cases ever recorded for that period in the State of Illinois. Heretofore, the year of lowest diphtheria incidence was in 1945, when a total of 47 cases was reported for the first 13 weeks of that year.

POLIOMYELITIS morbidity reports for the first 13 weeks were well under both last year's figures and the 5-year median. The State's figures for 1948 show a decrease of 68% from 1947, while for the entire country the decrease was 40%.

MAJOR COMMUNICABLE DISEASES† — STATE AND NATION, 1st QUARTER — 1948

Disease	ILLINOIS			UNITED STATES		
	1948	1947	5-Year Median	1948	1947	5-Year Median
Diphtheria	28	54	152	2,725	3,760	3,760
Influenza	30	752	122	121,308	206,662	175,984
Measles	26,917	571	6,590	199,206	69,066	210,408
Meningitis, Meng	57	59	219	1,119	1,117	3,232
Poliomyelitis	8	25	13	399	667	453
Scarlet Fever	1,837	1,939	2,870	30,853	35,869	51,038
Smallpox	0	2	3	33	61	136
Typhoid & Para	17	22	20	566	570	692
Undulant Fever	132	117	47	1,185	1,372	**1,172
Whooping Cough	794	1,168	1,033	28,738	33,138	31,641

*By Jerome J. Sievers, M.D.

†Provisional Totals....**2-year average, 1946-1947

WHOOPING COUGH has declined, both in Illinois and in the Nation as a whole. The total of 794 cases reported in Illinois this year is well below the 1,168 reported for the corresponding period last year and the 5-year median calculated at 1,033. The sharp rate of decline in this State may be due partially to the extensive and effective use of whooping cough vaccine, made available to physicians by the Illinois Department of Public Health.

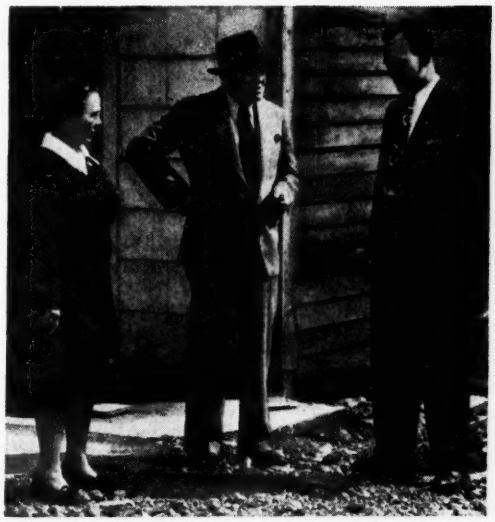
LOCAL PHYSICIANS AND HEALTH DEPARTMENT WORK TOGETHER IN TORNADA AREA

On March 19 at 7:45 a. m. a tornado cut a swath of death and destruction across Madison and Macoupin counties. Local physicians, State Health Department representatives, and District Health Officers Dr. Norman J. Rose and Dr. James W. Chapman immediately rushed to the scene of disaster to insure that all threats to the public's health were under control.

The town of Bunker Hill was 80% damaged; Fosterburg was leveled; Woodburn was leveled; Gillespie suffered a great deal of damage; Alton was damaged in three areas; and Litchfield was slightly damaged.

With the aid of the State Police, supplies of blood plasma, tetanus antitoxin, typhoid vaccine and penicillin were rushed to the area and the Department of Aeronautics also cooperated in flying medical supplies.

The accompanying photographs show the doctors at work. Naturally these three physicians were not the only one giving their services in Bunker Hill and Fosterburg, but they represent the fine spirit of cooperation on the part of the medical profession.



Dr. C. W. Draper of Bunker Hill planning with the State District Health Officer and District Public Health Nurse. Left to right: Florence Buchanan, R.N.; Dr. James W. Chapman, Health Officer; and Dr. C W. Draper, local physician.

Representatives of the Alton Medical Society talk things over with the State District Health Officer. Left to right: Dr. Norman J. Rose, Health Officer; Dr. Edward Mulvill, Alton Medical Society; and Dr. William C. Eaker, Alton Medical Society.

Drs. Edward Mulvill and William C. Eaker of the Alton Medical Society being assisted by State Public Health Nurses in giving typhoid immunizations to Fosterburg children.

Correspondence

OPHTHALMOLOGISTS ANNOUNCE CLINICAL CONFERENCE

The Chicago Opthalmological Society announces its Second Annual Clinical Conference to be given November 29-December 4, 1948. Special attention will be paid to the pathology and the clinical aspects of gloucoma and retinal diseases. Recent advances in general opthalmic therapeutics will also be presented. The class will be limited to 50. For further information address Miss Maud Fairbairn, 8 West Oak Street, Chicago 10, Ill.

PENNSYLVANIA MEDICAL ALUMNI DINNER JUNE 23

University of Pennsylvania Medical Alumni will hold a dinner at the Convention of the American Medical Association in Chicago, Wednesday, June 23, 1948 at the Lake Shore Club, 850 Lake Shore Drive. On arrival in Chicago, alumni should contact Miss Frances R. Houston, Executive Secretary of the Medical Alumni Society, at the University of Pennsylvania registration booth.

SPIES AND O'NEIL ON MILK COMMISSION PROGRAM

The American Association of Medical Milk Commissions will hold its forty-first annual meeting in Waukesha, Wisc., June 18 to 21. Guest Speakers will be Tom Douglas Spies, M.D., Professor of Nutrition and Metabolism, and Chairman of the Department at Northwestern University, School of Medicine.

Dr. John P. O'Neil, Chairman of Committee on Nutrition of the Chicago Medical Society, will be the speaker at the annual banquet.

PROGRAM FOR POLIOMYELITIS CONFERENCE JULY 12-17

Twenty international medical and scientific authorities will present papers on poliomyelitis at the First International Poliomyelitis Conference in New York City, July 12-17.

Speakers and titles of their papers follow:

Dr. Albert B. Sabin, professor of research pediatrics, University of Cincinnati, Cincinnati, Ohio, "Epidemiological Patterns of Poliomyelitis in Different Parts of the World."

Professor H. J. Seddon, medical director, Wingfield-Morris Orthopaedic Hospital, Oxford, England, "Economic Aspects of Management of Poliomyelitis."

During the session on the early stage of poliomyelitis, delegates will hear three speakers — Dr. Irvine McQuarrie, head, Department of Pediatrics, University of Minnesota, Minneapolis, Minn., "The Evolution of Signs and Symptoms;" Dr. David Bodian, associate professor of epidemiology, The Johns Hopkins University, Baltimore, Md., "The Pathological Anatomy," and Dr. Fritz Buchthal, director, Institute of Neurophysiology, University of Copenhagen, Copenhagen, Denmark, "The Pathological Physiology."

Dr. John A. Anderson, head, Department of Pediatrics, University of Utah, Salt Lake City, Utah, will discuss "Diagnosis and Treatment"

in the management of the disease during the early stage.

Three speakers will discuss the convalescent stage of poliomyelitis — Dr. E. T. Bell, professor of pathology, University of Minnesota, "Progressive Pathology;" Dr. Arthur L. Watkins, chief of physical medicine, Massachusetts General Hospital, Boston, Mass., "Progressive Disabilities," and Dr. Ralph K. Ghormley, consultant on orthopedic surgery at Mayo Clinic, Rochester, Minn., "Progressive Deformities."

Dr. William T. Green and Dr. Joseph S. Barr, both clinical professors of orthopedic surgery at Harvard University, Boston, Mass., will present papers on management of the disease. Dr. Green's paper will be on the convalescent stage of the disease and Dr. Barr's on the late stage.

Three authorities will be at the speaker's rostrum for the session on bulbar poliomyelitis. They will be Dr. K. T. Neubuerger, professor of pathology, University of Colorado, Denver, Colo., "The Pathology;" Dr. A. B. Baker, professor of neurology, University of Minnesota, "The Diagnosis," and Dr. James L. Wilson, professor of pediatrics and communicable diseases, University of Michigan, Ann Arbor, Mich., "The Treatment."

Presenting papers on immunology and chemotherapy in the disease will be Dr. Isabel M. Morgan, assistant professor of epidemiology at The Johns Hopkins University, "Mechanisms of Immunity in Poliomyelitis;" Dr. John R. Paul, professor of preventive medicine, Yale University, New Haven, Conn., "Immunogenic and Other Types of Poliomyelitis Viruses," and Dr. Raymond N. Bieter, professor of pharmacology, University of Minnesota, "Experimental Chemotherapy."

There will be three speakers at the session on public health aspects of epidemic poliomyelitis. They will be Dr. Joseph G. Molner, Deputy Commissioner of Health in Detroit, Mich., "Public Health Measures;" Dr. C. W. Munger, director, St. Luke's Hospital, New York City, "Hospitalization," and Elizabeth P. Rice, director of social service, Grace-New Haven Community Hospital, New Haven.

THE AMERICAN CONGRESS OF PHYSICAL MEDICINE

Will hold its twenty-sixth annual scientific and clinical session Sept. 7, 8, 9, 10 and 11 inclusive, at the Hotel Statler, Washington, D. C. Scientific and clinical sessions will be given the days of Sept. 7, 8, 9, 10 and 11. All sessions will be open to members of the medical profession in good standing with the American Medical Association. In addition to the scientific sessions, the annual instruction courses will be held Sept. 7, 8, 9 and 10. These courses will be offered in two groups. One set of ten lectures will be based primarily on physics and physiology and attendance will be limited to physicians. One set of ten lectures will be more general in character and will be open to physicians as well as to physical therapists. The physical therapists must be registered with the American Registry of Physical Therapy Technicians. Full information may be obtained by writing to the American Congress of Physical Medicine, 30 North Michigan Avenue, Chicago 2, Illinois.

It will be noted that families with an income below $1,000 per year have nearly four times as much disability from tuberculosis, nearly three times as much disability from orthopedic impairments, and approximately twice as much diseases, and nervous diseases as families with incomes over $5,000. For relief families, the ratio rises to nearly ninefold for tuberculosis, and fourfold for orthopedic impairments, between threefold and fourfold for rheumatism and digestive diseases. Considering all causes of disability together, the group with incomes under $1,000 shows 66 per cent more disability and the relief group shows 155 per cent more than the families with incomes over $5,000. C. E. A. Winslow, D.Sc., Am. J. Pub. Health, Jan., 1948.

Original Articles

PRESIDENT'S ADDRESS
THE CHALLENGE OF ORGANIZED MEDICINE IN A CHANGING SOCIAL ORDER

I. H. Neece, M.D.
DECATUR

Centuries ago, an old Greek philosopher remarked, "You can never step into the same river twice." He meant that the inevitability of change is the only unchanging fact in the world. Not the individual, not society, not the world itself, stands still. Life manifests itself always in movement from the atom to the cosmos.

Certainly there are few who will differ with Heraclitus. We have all seen too much in the last half century to think otherwise. These years will go into history as a period of exceptional unrest and change — of strife and movement — of invention and scientific progress, during which things spiritual and material, economic and social, have been shaped and molded, destroyed and recreated, to an extent probably never before witnessed in a single generation.

Some years ago there was translated from the Polish into the English a remarkable novel of the beginning of the Christian era, bearing a Latin title, "Quo Vadis?" It had to do with a very unpleasant person called Nero. The title, "Quo Vadis?", which means "Where are you going?", has always intrigued me; it is a question we would do well to ask ourselves at frequent intervals in this world of change, and never more so than right now.

The tempo of the world has quickened. Customs, methods, governments, laws, traditions, beliefs — are changing. Around the world the things that have been are on trial for their lives before the bar of things that are.

To deal intelligently with the query "Quo Vadis?" or "Where do we go from here?" involves some consideration of other questions — whence did we come, where have we been?

So let us look back a bit along the trail we have traveled. When we consider the early days, we find it difficult to believe that techniques were so crude and knowledge so limited. Comparison of medical practice one hundred years ago with the highly technical and specialized system of the present day services to dramatize the extent of medical progress. The backward perspective gives us opportunity to view medical and social situations in broad outline, to see trends, dimensions and proportions. An outstanding feature of this century past has been the rapid shift and change of long established social institutions. As we view these changes, the realization is forced upon us that society is a delicately integrated body, just as is the body of man; so closely knit and interdependent are its parts that a change in any one must necessarily result in a change in all other parts, in a total readjustment.

It follows, therefore, that advances in the field of medicine which result in the saving of lives and the improvement of health must be followed by a reorganization of society as a whole. When we prolong many lives, we change the age structure of the population. A change

Presented at the 108th annual meeting, May 11, 1948, Chicago.

in the age structure in turn upsets the balance of established institutions and forces social and economic readjustments.

That is one of the principal consequences of one hundred years of medical progress — progress especially in preventive medicine — which has brought about an enormous diminution in the diseases and deaths of early life, the acute infectious diseases, and infant mortality and virtually doubled the average length of human life. The age structure of the population has shifted and is still shifting. The facts and figures are familiar to all of us: In 1900 there was one person 60 years of age or over in every 20 members of society; in 1930 there was one in every 12; and by 1960 there will be probably one in every six. One-sixth of the population will be sixty years of age or over!

Here undoubtedly is the greatest factor of its sort that has ever affected society. In past years there were changes due to war and pestilence but they have meant loss, not saving, of life. Here, growing from medical progress, is a social and economic problem of vast magnitude. The first efforts toward solution have taken the form of social security legislation and old-age pensions; but these efforts do not touch the real problems of old age and retirement in an industrial civilization. They do not touch the consequences to medicine.

It is axiomatic in our profession that, as one disease diminishes, it is replaced by another. As the incidence of tuberculosis, typhoid, dysentery, and smallpox goes down, cancer and diseases of the circulatory system rise. The tremendous change in the leading causes of death during the last hundred years is well known to all of us.

That far the physician sees clearly. Sometimes, however, I believe we fail to realize that medicine itself is one of the institutions doomed to be affected by the changes in society. Changes in the social structure inevitably work their way into the practice of medicine. Medicine cannot stand alone; it is an integral part of the social structure. It must either make the necessary adjustments to change or be swept aside. Readjustment, continual readjustment of medicine is the inevitable consequence of medical progress.

Medicine, of course, has made adjustments — many of them. No practitioner of today would think of using methods employed by practitioners fifty or one hundred years ago. A graduate in medicine in those days was only an apprentice in medicine; by many years of close attention to clinical experience, hard work, and post-graduate courses he became a doctor.

Many of our graduates went to England, France, and Germany to finish their education and brought back the knowledge gained to improve our work in the United States. During the past few years, however, our medical teaching has been sought by the graduates of the European schools.

The doctor one hundred years ago knew little of the causes of disease; his mission was to cure his patient if he could, and to relieve suffering as much as possible. The general practitioner was a heart specialist, lung specialist, stomach specialist, and skin specialist, all in one. Death always lurked around the corner. Typhoid came regularly every Spring and every Fall. Scarlet fever and influenza took their annual toll. The only treatment the physician knew for pneumonia was to wrap the patient in blankets and give him fresh air. Infant mortality was deplorably high. Aseptic surgery was unkown and would have been scoffed at had any radical dared to suggest it. Those were the days of the *vis medicatrix naturae*, the natural impulse of living tissue to remove disease or repair injury.

In spite of his deficiencies, however, the doctor was more intimately associated with his patients than the average doctor of today. Frequently his sympathetic advice was worth more than the medicine he prescribed. He knew the reactions of people in health and in sickness and he was a close student of human nature. Having no instruments of diagnostic precision, his senses were highly trained and his general comprehension was acute. He learned more medicine from clinical experience than from books.

Those were the real "horse and buggy" days. But the doctor often went on foot and carried his saddle bags on his shoulder. He filled his own prescriptions and used but few drugs and those for their therapeutic effect. He met emergencies, when they arose, as best he could, with faith in himself as an agent of a Higher Power.

The medical student of today has all of the scientific medical discoveries since Aesculapius, collected, condensed, and revised for his instruction. He has four years of carefully supervised

teaching, two years of hospital work for assimilation before he is allowed to demonstrate his ability as a doctor.

The physician of today is always aided by modern trends in medical research. Medical research has directly stimulated the development and improvement in x-ray machines, equipment, and technique. Radiologists have long used 200 kilovolt machines in treating cancer. Then curiosity developed the 400 kilovolt machine and finally the million volt appartus. Deep x-ray therapy found ready use for each in spite of newness and cost. Recently we have seen advertisements of great industries using million volt x-ray machines of new, compact, and safe design in search of flaws in metallic castings and machinery. Truly the world of science is generous.

The electron microscope is a recent development by radio engineers who gave us new tools to search with among things formerly invisible. The old-fashioned centrifuge, operating at what we thought was good speed, has now been developed into the untracentrifuge which has power undreamed of to separate things, even to pull cells apart for study. Medical science is quick to use it when available.

The physiologists, pharmacologists and chemists have been equally busy in their respective fields and today all the world knows about vitamins, the sulfa drugs, penicillin and changes which have come about in the drugs used by physicians in treating disease. For instance, the modern young medical graduate doesn't use much calomel, but he knows a lot about new medicines and hormones. His ideas about the treatment of malaria, fractures, infections, and venereal diseases are quite different from those of his father, but they are very well based upon exact research and the study of data accumulated from objective investigations in many quarters of the world.

The students of bacteriology have new techniques for old processes and the brand new field of virus studies to work into as, almost daily, research changes our ideas of the causative factors of some diseases. Now we can about agree that among the important virus diseases are influenza, the common cold, yellow fever, encephalitis, smallpox, measles, and infantile paralysis. The field of virus studies is one the "horse and buggy" doctor never dreamed of.

In resume it might be said that current medical science is keenly alive to its opportunities and responsibilities and is doing its fascinating part in helping to make this a better world to live in.

The changes in the social structure have influenced the very structure of medical practice. In 1848 nearly all physicians were general practitioners. Certain persons became especially interested in surgery, but they seldom abandoned general practice entirely. This combination of physician and surgeon in one practitioner came down from early times when differentiation would have been impractical. As a result surgery always maintained equal prestige with internal medicine, in contrast to the professional and social distinctions which have been traditional in Great Britain.

It is usually assumed that specialization was lacking at that time simply because there was not enough knowledge to justify it. That was indeed one factor in the situation. But there was another basic explanation. Prior to about 1830, American physicians did not usually think in terms of a localized pathologic process or of specific diseases. Speculative pathologies had dominated medical thought up to that time. All forms of illness were ascribed to one or two generalized conditions, such as impurities of the blood or the existence of excessive tension or laxity in the nervous and vascular systems. They were appealing theories since they solved all pathologic problems at once and also opened up a royal road to therapeutics. If all illness was due, as Benjamin Rush claimed, to excessive tension in the blood vessels, then all patients could be cured by bleeding to relieve that tension.

As long as all forms of illness were viewed as expressing a single, underlying condition, there was no need for specialization in practice. Incidentally, there was also no use for major surgical operations, for one could hardly operate on the blood or a vague condition common to the whole vascular system. Hence, surgical practice remained largely a matter of fractures, amputations, and other superficial emergencies. Here again there was little need for specialization.

Only when a localized, structural basis for pathology replaced the speculative systems was specialization possible. When specific diseases were identified by correlating lesions with symp-

toms, the possibility of treatment by removing these lesions became obvious. Surgery was by 1840, therefore, beginning to move from the periphery toward the center of medical practice. And there was now some reason for specializing in other fields than surgical practice, in work on a particular part or system.

But these new points of view, imported from Paris by returning American students after 1820, percolated slowly into average practice. Not until after the Civil War did specialization really get under way, even in the cities. There was strong opposition at first, partly because of the fear that it would injure the interests of both patient and practitioner, and partly because in the earlier days only quacks had claimed to be specialists. Dr. S. Weir Mitchell could recall the time in Phildelphia when to specialize meant to be professionally ostracized.

It is a long cry from those early days to modern ones, and many of us are wondering whether the swing of the pendulum has not landed us out on the end of a limb. Do not misunderstand me. I am not against real and proper specialization. But specialization can begin only after an over-all mastery of general medicine and general surgery has been achieved.

The American lay public much resembles the French. It jumps at conclusions and rushes to extremes. It is highly emotional and responds to sensational newspaper headlines. That point was emphasized by Dr. Arthur Sullivan, Managing Director of the Interstate Post Graduate Medical Association of North America, as reported in the St. Louis Globe Democrat, October 14, 1947. Dr. Sullivan said that people guess what is wrong with them and then select the specialist they think they should go to, without consulting the family physician or the general practitioner first. In that way valuable time and money are lost, he declared. Dr. Sullivan estimated that 80 per cent of all cases can be handled by the general practitioner. "The general practitioner," he emphasized, "is the backbone of medical practice."

According to Dr. R. B. Robbins, in a compelling article in the November 22, 1947, *Journal of the American Medical Association*, "Hints in General Surgery," the family physician, even though he does not practice surgery, is interested in surgery and surgical progress. He says: "Many general practitioners do what is known as ordinary surgery and do it well."

In the beginning, medicine was entirely an art. There was little or no science. But certain instruments like the microscope hastened its progress toward the scientific stage. Today, with increasing knowledge of physiology, pathology, and bacteriology, and the rise of specialization, medicine tends to become more a science and less an art. Intellect, emotion, habits, inheritance, and environments are to be reckoned with. Often judgment and diplomacy of a superlative degree are required to cope successfully with the peculiarities and idiosyncracies of the patient, although the scientific aspects of the case have been analyzed and interpreted perfectly. There must be exercised patience, kindness, and sympathetic understanding. Patients are human beings, and sick human beings are not normal. So we should all know something about psychiatry as well as medicine and surgery. Who, more than the general practitioner, the family physician knows this better? He does not need a course in psychosomatic medicine to tell him that.

Since 1917, when the first specialty board was established for ophthalmology, there has been a steady increase in the number of specialists and sub-specialists. We have today approximately 100,000 general practitioners, 21,500 surgeons, and 28,750 specialists. General practitioners therefore outnumber specialists and surgeons combined by more than two to one. In spite of this fact, we note a tendency for some hospitals to deny staff membership to many general practitioners. And we note an equally strong move for hospitals to take over the practice of medicine.

Looked upon too often as "just a doctor," the general practitioner remains the prime guardian of individual health. Dr. James E. Paullin, a distinguished medical specialist at Atlanta, recently told a meeting of the American College of Surgeons that America probably has more specialists than it needs and that the role of the family doctor or general practitioner will grow more important with the advancing years. The family doctor knows every member of the family and he knows them intimately. This background aids him greatly in diagnosis and

treatment. There is no doubt that his place is still secure.

No picture of the changing scene would be complete without some mention of the problems of rural medicine. The scope of the problem which we face today was well summed up by Dr. F. S. Crockett at the 1947 meeting of the National Conference on Rural Health. He said: "We doctors and farmers are trying to improve not only rural medical service but also rural health." He explained that "rural health embraces everything that will promote better living conditions, better living standards, and better medical service."

Medical indigency in rural areas primarily has three causal factors: Inability to afford the kind of medical attention needed; too few physicians and dentists; and inadequate hospitals, equipment, and nurses. These factors are interrelated so that one is definitely dependent on the others insofar as medical health is concerned.

Because the average farmer is less able to pay for adequate medical service, there is a tendency for physicians to settle in urban communities. Before the war the thousand most rural counties throughout the country had only one medical doctor for every 1700 people. In the big cities there was one doctor for every 650 people, and in 1200 rural counties containing 15 million people, there is not a recognized hospital. Actually, we should have 3.5 or 4 hospital beds per thousand rural people.

It is my conviction that the local representatives of farm organizations, together with business groups and local medical societies working in full cooperation and mutual confidence and understanding, are now in a position as never before to work out this heretofore difficult phase of delivering medical care to the people of our rural areas.

On recommendation of the Committee on Medical Service and Public Relations, the Council of the Illinois State Medical Society has recently approved the idea of forming special Health Councils in each community, to outline programs to fill the needs, and to work for their execution. In such groups every element of the community which is interested in health can be brought together in a common effort, with each challenged by the other to put forth its best exertions. Labor, management, law and the ministry, farmers and business men, press and radio, women's and men's organizations, public and private agencies, laying aside their individual differences, thus get together to concentrate all their efforts to help the medical profession raise the community health to the highest level possible. Surveys can show the need; such an organization has all the propoganda, educative, political and financial resources needed to carry out the plans. In such groups medicine must be the leader; no other element has the knowledge and experiences necessary. That is good for medicine as well as for the community.

So much has been happening, so many variations have occurred, that the average physician has not had the time nor the opportunity to keep up with the changing world about him. But make no mistake, the world has been changing. The practice of medicine is confronted at this precise time with modifications which may be not only extensive and serious but which might well alter our entire concept of what constitutes good medical practice.

I am referring, of course, to the legislative proposals which have been gaining momentum during the last 25 years and have come to a climax in the last few years in Washington. You are all aware of the introduction in Congress of the Wagner-Murray-Dingell bill, which would establish on a national scale here the same type of governmental compulsion under which the people of Great Britain now suffer. President Truman's health program includes some meritorious suggestion, but also a nation-wide compulsory health insurance plan which again threatens to remove medical practice from the hands of those who best know it, and to place it in the hands of politicians and bureaucrats.

We cannot ignore these warnings. They are coming too fast and too consistently, backed by too much political power, for us to pass them by. We must, of course, freely admit among ourselves that there is an uneven distribution of medical care. Shall government remedy this situation or shall we? We are at the crossroads. We must select the manner in which we believe medicine should be practiced and we must fight for the preservation of that system. If we do not, we are bound to end up under the domination of politicans and bureaucrats, without souls

which we may call our own.

Under the type of legislation thus far introduced, all groups of practitioners would be affected. All specialty groups, as well as the general practitioner group, would come under the provisions and influence of these plans if they become law. And the history of all such compulsory plans is that they are always modified toward more complete control of the medical profession by the government, with ever-increasing central bureau expansion and power.

It is significant that 86 per cent of Britain's doctors have rejected the system of nationalized medicine as practiced under the British panel system. That is concrete indication of the failure of any scheme of health insurance in which the government exercises control. It behooves us to work for our own method of the private practice of medicine is to survive in this country. In reaching toward this goal, we must constantly keep in mind that the medical profession must at all times retain control over the offering of its own services. We dare not turn such an important function over to anyone else. We certainly do not want to turn it over to politicians and bureaucrats. Neither should we turn it over to hospitals and social planners. We must keep medical practice in our own hands if we hope to have any voice in the future of our own profession.

The private practice of medicine must survive if the scientific practice of medicine is to progress. We can hope for nothing more under political control than an eventually complete domination of medical practice by a group of laymen who are interested more in the preservation and promotion of their own positions than in the health of the public or the progress of scientific medicine.

The upshot of the American medical perspective may be found once more in Heraclitus' assertion that the only thing that doesn't change is change itself. Too long we have maintained a tunnel-vision attitude toward the public need for better medical treatment at a lower cost. May we work toward the development of a plan through which our sons and grandsons may be enabled to enter the practice of medicine under the free enterprise system which will encourage them to work for still further scientific advance.

The last one hundred years have brought about great improvements in the internal relationships of our profession. The old antagonisms and acerbities have for the most part given way to a spirit of tolerance and cooperation. Let us join hands in the same spirit with those outside our profession in creating a new era for people and medicine. As we have learned in our internal relations, let us learn in our association with other fields, the words of Emerson who said:

> Life is too short to waste in critic carp or cynic bark,
> Quarrel or reprimand; 'twill soon be dark;
> Up! Mind thine own aim and God speed the mark.

PSORIASIS, WITH SPECIAL REFERENCE TO ETIOLOGY AND TREATMENT

HARRY MALCOME HEDGE, M.S., M.D., F.A.C.P.
CHICAGO

Since the presentation of my paper on psoriasis at the dedication of the Ward Memorial Building of the Northwestern University Medical School in 1927,[1] in which I emphasized the importance of calcium and calcium regulating substances in the production and treatment of psoriasis, and since the publication in 1931 of my article, "The Blood in Psoriasis"[2], the question of calcium as one of the important factors in the etiology of psoriasis has been repeatedly forced upon my attention. In harmony with that article it is still my opinion that the impoverishment of the protein molecule that is used as a base for skin formation, when impoverished with regard to the calcium element, forms the dominant factor in the production of psoriasis.

In spite of the fact that material has been abundant and the cooperation of the patients in most cases is assured to the full, it seems that we have been trying to remove the scales in place of changing that mode of life or diet that has been the cause of the disease. Our principal problem, as I see it, is that the etiology of this disease is so complicated that we cannot lay down one set of rules to be followed which will produce uniformly good results in therapy.

I contend that diet alone, infection alone, or endocrine imbalance alone will not produce psoriasis. And that is why we have been baffled when we came to our conclusion as to the prob-

Assistant Professor of Dermatology, Northwestern University Medical School.

able cause of psoriasis and when put to the test to produce that condition in the laboratory or clinic did not find it to result in the desired end or the production of psoriasis. That these same irregularities may be a very definite factor nevertheless when coupled with other bodily deficits is accepted. The diet may be low in calcium or high in calcium but if the patient has other pathological conditions which make the utilization of that calcium impossible, the disease will flourish. There may be an infection which produces such a condition in the blood as a high uric acid state and this, causing a lowered threshold of calcium excretion, may maintain the disease in a serious condition in spite of all treatment; hence, the seriousness of prognosis in what we call arthropathic psoriasis. There may be an endocrine imbalance in which, due to the lack of function of the parathyroid, adrenal, or the pituitary or possibly other glands whose interrelation causes balance to be established, so in those conditions again the disease shows no favorable results until this irregularity is corrected. In any of these conditions, and many others as well, regardless of how much or in what state the calcium is prescribed, it cannot be utilized and will remain as crude calcium unmetabolized or rapidly excreted to produce no beneficial result in the elimination of the symptoms of the disease.

Allow me at the beginning to state more or less in definite terms what has seemed to be the cause of psoriasis and later to show some of the proofs of these conceptions. (1) Analysis of the blood does not show any appreciable change in calcium content in psoriatics, due to the fact that the blood is the last tissue to change in the pathologic state and so long as calcium is present in the bones, teeth, tissues, and diet, it will be drawn upon to supply the normal balance in the blood stream. (2) Psoriasis appears at places where there is a rich anastomosis of small blood vessels and at such sites first disappears under calcium treatment. (Elbows, knees, frontal hair margin, supra-auricular scalp regions, and lumbar regions.) (3) The threshold of calcium excretion may be lowered by such diseases as arthritis (arthropathic psoriasis) to such an extent as to produce the most intractable and malignant form of the disease. (4) Certain drugs, as Fowler's Solution, which act upon the calcium mobilization have been known for years to produce beneficial results in cases of psoriasis. (5) Stimulation of the thyroid and parathyroids and administration of the extracts of these glands may in many cases result in beneficial effect upon the disease. (6) In chronic hypo-acidity of the stomach calcium cannot be utilized regardless of the amount administered for it requires an acid medium in which to be absorbed and hence may be a factor in the continuation of the symptoms of psoriasis. (7) There are certain components of the diet (fat) which may supplant the calcium particularly when bile is deficient and will lead to loss of calcium as calcium soap in the stools. Also if the diet contains a relatively large amount of oxalic acid the absorption of calcium will be deferred. Further, if there is a dietary imbalance of calcium and phosphorus without adequate amounts of vitamin D, calcium may again be lost. (8) Deficiency of endocrine, especially the thyroid and parathyroid which may be indicated by a low BMR, will when checked also show a high cholesterol blood content and many psoriatics will also show this high cholesterol blood.[3] (9) The seasonal incidence also confirms our belief for when there is more ultraviolet light in the normal atmosphere and thus more calcium mobility produced there is less psoriasis as seen in the summer and winter respectively. (10) Some of our vitamins have been found to be beneficial due to their calcium mobilizing action. (11) Persons under heavy nervous strain due to depressions and financial worries are much more resistant to therapy than persons in normal health, probably due as much to their lack of ability to properly digest and utilized food and hence appropriate the calcium in the normal diet.

Let me state, then, that psoriasis is not due to any one factor but is a result of a symptom complex with calcium deficiency as its foundation and with this in mind we can search the patient, correcting such errors of diet and manners of living, or such pathological existing conditions as may hinder the proper utilization of the calcium intake so that these protein molecule "X" units may be built up and placed back on a state of healthy function.

Let me now take my eleven points and make them a little more clear and less empiric.

(1) The blood does not show early changes in calcium. As I showed in my article in the[2] Archives of Dermatology and Syphilology of

August, 1931, in the analysis of over 500 bloods from more than 150 patients there was a very small number that did not fall within the normal range. We also know that during lactation of pregnancy and childbirth the blood will show very little variation in calcium content but that it does make a special effort to draw more freely at this time upon the reservoirs of the body to supply the calcium as needed for the blood stream.

(2) The natural distribution of psoriasis is first the elbows, knees, frontal hair margin, parietal scalp regions, and lumbar regions, and these are the locations of the rich anastomosis of the small blood vessels arising from the larger blood vessels above and below these sites. According to G. DeTakets[4] three per cent of all cases of varicose veins have psoriasis, and the lesions are usually unilateral selecting the side of the varicosities or increased blood supply.

(3) According to Frank Smithies, M.D., Chicago,[5] in arthritic patients and those afflicted with arthropathic psoriasis a rise in uric acid in the blood is often found. This occurs also in other chronic inflammatory lesions of the liver and biliary tract which prevent the normal excretion of bile with an increase of urea and nitrogen. When this rise takes place the threshold of calcium excretion is so lowered that no matter how much calcium may be taken in the diet or by medication there is no retention as the dam has been washed away and the mineral flows out before it has a chance to be absorbed.

(4) For generations past Fowler's Solution — Liquor Potassii Arsenitis — was used indiscriminately by the physician because it was known that a large percentage of cases of psoriasis would benefit by the administration of this drug. It was not known until some laboratory investigation gave light to the point that the arsenic in this form was a calcium mobilizer. If Fowler's[6] Solution is given to half a litter of rabbits or guinea pigs and the other members of the same litter be kept upon the same diet minus the Fowler's Solution for a period of three months it will be found that those upon the arsenic had gained almost one-third more in weight than those without the arsenic. This was thought to be due to the tonic effect of the drug until autopsies proved that it was not an increase of fat or muscle but an increase of calcium in the long bones that had been utilized that caused the increase of weight. Again we see the drug so frequently used for therapeutic purposes in psoriasis produces its effect by its action as a calcium mobilizer.

(5) X-ray stimulation of the parathyroids has been used by Brock[7], Foerster[8] and others with beneficial effects upon the utilization of calcium within the body.

(6) According to a report made at the[9] Mayo Clinic in the study of nearly 3000 consecutive patients regarding the normal acidity of the stomach, Vanzant found that in the two months of November and February there was a low ebb of gastric acidity. These months correspond to the months of greatest incidence of psoriasis. When there is a hypo-acidity the calcium of the normal intake in the diet cannot be so successfully used by the body as when there is normal or slightly hyperacid conditions in the stomach.

(7) As the calcium compounds with amino acids and proteins are unstable and as compounds of fat and protein are much more stable, diets composed largely of fat tend to form a stable compound to the exclusion of the less stable, thus again causing a loss of calcium. When this takes place the molecule so far as the calcium is concerned is impoverished and a psoriasis in one with this form of diet will be more resistant to treatment than after the fat is removed or lessened in the diet.

(8) While there is still a disagreement as to the rise in cholesterol in psoriasis as shown by the disagreement of Rosen, Rosenfeld, and Krasnow[10] and that of Grutz and Burger[11], those cases which show a rise will also show a deficient BMR. With the deficient BMR there is a low functioning thyroid and hence a lack of control for calcium metabolism.

(9) With more ultraviolet light in the atmosphere in summer and less in winter there is respectively less and more psoriasis due to the mobilizing of the calcium in the body as a result of its exposure to the ultraviolet light.

(10) The results that were obtained by Richardson[12] and others (Illinois Medical Journal, June, 1931) in the use of irradiated ergosterol in pregnancy and the side observation made with regard to psoriasis could be interpreted on the basis of calcium mobilization due to the larger doses of the irradiated ergosterol.

(11) While psoriasis has been mistermed the "Disease of the Healthy" we see in those indi-

viduals who had had a light case of psoriasis when times of plenty and contentment were at hand, experienced exacerbations when depression and financial worry came to them and during this exacerbation they were resistant to all forms of treatment until such time as worry and strain upon the sympathetic nervous system (the calcium regulator) became less and function became more normal.

May I then state my belief that psoriasis is not an entity as such but a resulting symptom complex which may be present in many different types of disease and caused by the same fundamental element, namely, the depletion of calcium in the protein molecule that is used for the formation of the cellular structure which goes to make up the integument of the body.

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BIBLIOGRAPHY

1. Hedge, Harry M.: Northwestern University Medical School Dedication of the Ward Memorial Building, Chicago. Lakeside Press, Chicago, p. 137-143.
2. Hedge, Harry M.: "The Blood in Psoriasis". Arch. Derm. & Syph., 24: 204-217, Aug., 1931.
3. "Oxalic Acid and Calcium Utilization". Current Comment, J.A.M.A., Vol. 105, No. 6.
4. DeTakets, G.: (Personal Communication), Feb. 16, 1932.
5. Proceedings of the Staff Meetings of the Mayo Clinic, Nov. 4, 1931, p. 660-661.
6. Wood, H. C., Jr., M.D.: "The Dispensatory of the United States of America", 20th Ed., 1918, Part 1, p. 194, Vol. 2, Lines 4 to 15.
7. Brock, Walter: Univ. Dermatologic Clinic at Kiel, Strahlentherapie, 1920, II, 2.
8. Foerster, Otto H. and H. R.: New Method of Roentgen-ray Therapy in Psoriasis. Arch. Derm. & Syph., 1921, IV, p. 639.
9. Vanzant, Francis R., M.D.: "Seasonal Variations in Gastric Acidity". Proceedings of the Staff Meetings of Mayo Clinic, Vol. 7, No. 43, Oct. 26, 1932, p. 613-614.
10. Rosen, Rosenfeld, and Krasnow: "Studies in Psoriasis", Arch. Derm. & Syph., 35: 1093-1100, June, 1937.
11. "Die Psoriasis als Stoffwechselproblem". Klin. Wchnsch., 12: 373-379, March 11, 1933.
12. Richardson, G.: "Irradiated Ergosterol in Pregnancy", Ill. Med. J., June, 1931.

Minimal, noninfectious cases (of tuberculosis) are private physicians' cases, not sanatorium cases. Indeed, the private practitioner can be a major force in the future control of tuberculosis in the communities of our country if he undertakes to participate in follow-up activities after surveys have been completed. Through his efforts, minimal tuberculosis can be checked and, in individual cases, never become serious. Under the physician's care, needless distress and tragedy can be avoided. As a consequence of his vigilance, the general practitioner can reduce measurably the occurrence of deaths from tuberculosis. Francis J. Weber, M.D., Ohio Pub. Health, Feb., 1948.

COMPLICATIONS OF ARRESTED PULMONARY TUBERCULOSIS

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CHICAGO

An arrested case of pulmonary tuberculosis according to Diagnostic Standards is one in which there has been absent for a period of six months constitutional symptoms, positive sputum, and x-ray evidence of open cavity or progression of lesions. Conversely, a case is considered reactivated that presents a recurrence of the symptoms, x-ray and laboratory findings noted above. It is the belief of some clinicians, however, that it is not usually possible to employ hard and fast rules in classification and prognosis. The exceptions, they say, are frequent and baffling. In their experience the amount of sputum in relation to constitutional symptoms, x-ray, and physical findings may guide one in determining the course of the tuberculous disease. A decrease in the amount of sputum coupled with a drop in its bacilli count and a diminution in the quantity of rales show a tendency to arrest of the process. Increase in the amount of sputum associated with a febrile course would indicate an unstable lesion or the development of new lesions. It is the failure of physicians to realize that there are other factors, non-tuberculous or mechanical, that may bring about the persistence of sputum, fever, and rales that has led to the confusion in the designation of arrested and reactivated pulmonary tuberculosis.

There is a growing awareness among specialists in pulmonary diseases that the complications of arrested or "burned-out" pulmonary tuberculosis require special evaluation and careful definitive management. Extensive linear or plate-like scarring, hypertrophic emphysema, suppurative bronchiectasis, and stenotic constrictive bronchitis are the important features of the crippling, post-tuberculous disease. The physiological impairment of respiration and circulation that these complications engender are widespread and, at times, extremely disabling or fatal. A not inconsiderable minority of these cases have shown resolution or fibrotic shrinkage of the parenchymal tuberculous lesions followed by a negative sputum. In course of time their pulmonary and

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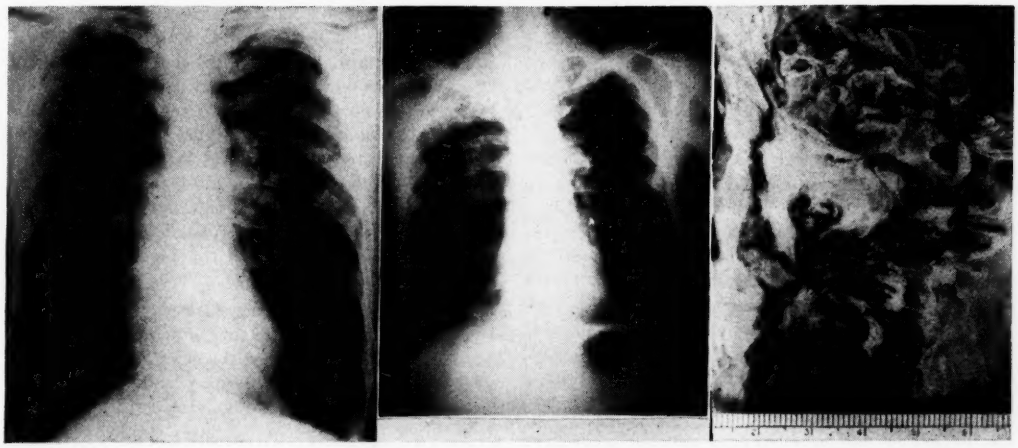

Figure 1. H.S. The above film shows nodular and linear fibrotic changes in both lungs, more marked on the left. There are emphysematous blebs on the right side. The flattening of the diaphragm and widening of the rib spaces are indicative of emphysema.

Figure 2. A.B. The above film shows an end-stage caseous pneumonic process of the right upper lobe. The hyperillumination of the lower lung fields and the flattening of the diaphragms illustrate the extensiveness of his emphysema. Highlights in the right upper lobe were interpreted as bronchiectatic because of the constant absence of tubercle bacilli from the sputum.

Figure 3. A.B. Pathological specimen showing old fibrosis, retraction of right apex with multiple saccular areas interpreted as old bronchiectasis. There are fibrotic strands and stellate scars which represent old areas of tuberculosis. There are no areas of caseation or tuberculous cavities.

circulatory decompensation become more and more evident. Several of these cases that came to post-mortem showed no evidence of active tuberculous lesions, but death could be traced to these sequelae of the arrested tuberculous complications.

Equally important is the need to draw a line between those pulmonary symptoms due possibly to the lighting up of the old tuberculous process and those which are essentially non-tuberculous yet completely overshadow the tuberculous picture. These distinctions have great epidemiological, as well as clinical, importance. Not infrequently a previously recognized arrested case is urgently readmitted to a sanatorium for routine tuberculous care when the more proper management lay in the field of bronchial drainage and antibiotics for the suppurative processes. Other cases of this type are in need of urgent treatment for the bronchopasm and anoxemia associated with the emphysema or diffuse pulmonary fibrosis. The management of the complications of arrested cases that follow collapse therapy, particularly pneumothorax or oleothorax, follows the same rationale. These cases may resume their cough and expectoration following the discontinuation of the collapse therapy and on these grounds may be handled as reactivated lesions. Bronchograms will show that bronchiectasis is the source of the symptoms.

Recognition of the arrested cases, on the other hand, will be delayed and sanatorium care unduly prolonged because cough and sputum persist beyond the six-month period of negative sputum reports. These problems have received much casual mention in the literature, but elucidation has been infrequent. It is the purpose of this paper to present illustrative case histories followed by a discussion of the diagnostic aspects in these cases.

Bronchiectasis is very frequently the cause of repeated colds, bouts of low grade fever, morning expectoration of purulent sputum and occasional hemoptsis. Foul or copious sputum, and clubbed fingers are no longer considered prime requisites for the diagnosis of ectasia. Bronchographic studies with lipiodol should be done whenever possible.

Case 1. H.S., white male, age 57 was first hospitalized for pulmonary tuberculosis at the Municipal Sanitarium in 1929. In 1943 he noted exertional dyspnea and cough. Because of his apathy and depression a neuropsychiatric consultation was requested, and the preliminary diagnosis of a "diffuse cerebral lesion" was made. In February 1945, he

was admitted to Michael Reese Hospital because of increasing dyspnèa, cough, expectoration of large amounts of sputum, and marked weight loss. (Figure 1) Bronchography with lipiodol showed cylindrical bronchiectasis. He was treated with penicillin aerosolization and improved considerably. In May 1945, it was felt that the patient's mental symptoms were based on oxygen deficiency. During the latter six months of 1945 he was again placed on routine tuberculous care at Winfield Sanatorium. He was given pneumoperitoneum in an attempt to relieve his emphysema. Much improvement was noted; his dyspnea and cyanosis disappeared, and he became ambulatory. The pneumoperitoneum was discontinued, partly because of abdominal pains, and the patient was discharged. After discontinuing dyspneic and cyanotic. He was then readmitted to the hospital where he remained for 26 days, his intractable dyspnea, cough, and weakness improving but slightly on oxygen therapy and penicillin aerosolization. In view of his anorexia and wasting it was felt that he had a possible G. I. malignancy. G. I. series, however, were negative.

Sputum examinations were repeatedly negative for tubercle bacilli. He again improved after a course of oxygen and penicillin aerosolization and was discharged to his home. On June 19, 1946 he became more severely dyspneic and cyanotic than previously and was readdmitted to the hospital. Diagnoses on admission were: pulmonary tuberculosis, arrested; emphysema; brochiectasis; chronic cor pulmonale, and superimposed acute infection. No evidence of acute pneumonitis, however, was demonstrable on the x-ray films of the chest. He showed only minor improvement on oxygen therapy and penicillin, went gradually downhill, and died on the 27th day following his admission. No postmortem was done.

Case 2. A.B., white male, age 56. This man was first hospitalized in 1932 for excision of fistula-in-ano which had been productive of symptoms during the preceding six years. For a period of 26 months from 1938 to 1940 he had been a patient at the sanatorium where the diagnosis of far-advanced pulmonary tuberculosis was made. He improved on bed rest and graduated activity. Following his discharge he returned to former occupation of salesman and felt well except for slight dyspnea on exertion. Repeated sputum examinations were reported negative for tubercle bacilli. Early in January 1946 he complained of symptoms resembling influenza. Admission diagnosis at another hospital was acute tuberculosis, and for this reason he was discharged within 48 hours. Actually, there was no evidence of acute pulmonary tubeculosis. (Figure 2). He made an apparently good recovery, but his increasing dyspnea and a persistent hacking, non-productive cough made hospitalization again necessary. His course in the hospital was marked by further increase in dyspnea and cyanosis, relieved temporarily by oxygen inhalation. On the third day of his stay, he exhibited Jacksonian tremors of the right arm and mental dullness. Embolic phenomena to the brain were suspected. On the fifth day there were involuntary, gross, purposeless movements of all extremities while at rest. Neurological examination revealed no evidence of a space-taking lesion or meningeal reaction. On the following day he was found disoriented and suffering from impairment of memory for recent events. He was again seen by the NP consultant who stated that the psychosis and clonic movements were related to hyperventilation. On the eleventh day of his hospital stay, patient died suddenly.

Postmortem examination showed extensive scarring and fibrosis of both upper lobes with diffuse bronchiectasis and large bronchiectatic cavities. (Figure 3) There was no evidence of active tuberculosis. Bronchopneumonia was present in the left upper lobe and pulmonary emphysema was diffuse. There was hypertrophy of the right ventricle of the heart and atheromatosis of major pulmonary arteries. The brain showed petechial hemorrhages in the pons.

In both of the foregoing cases, the tuberculous process in the lungs as observed clinically and in the x-rays became stationary. No acute spreads had occurred. Sputum remained persistently negative for tubercle bacilli. The sequelae, however, became of greater clinical importance than the basic disease process. Emphysema bronchiectasis and cor pulmonale, and not the pulmonary tuberculosis, caused the permanent disability. The physiological disabilities were also outstanding. Mental depression, Jacksonian tremors, anorexia, and marked wasting were without doubt associated with the severe anoxia. Temporary improvement in both cases followed the use of non-specific lines of therapy: penicillin aerosol for the purulent bronchiectasis and bronchitis, pneumoperitoneum to improve diaphragmatic action and vital capacity, and oxygen-inhalation therapy for the anoxemia. The cause of death, as well as the symptomatology, in both instances was pulmonary decompensation rather than activation of the pulmonary tuberculosis.

The following case illustrates the development of bronchiectasis in a case of tuberculosis. It also demonstrates how residual symptoms of cough and expectoration may be mistakenly interpreted as reactivation of the tuberculous lesion. The designation of arrested tuberculosis was delayed; whereas, early recognition with the aid of lipodol studies would have removed the case from the active file.

Case 3. S.K., white female, age 42. A diagnosis of pulmonary tuberculosis was first made in this

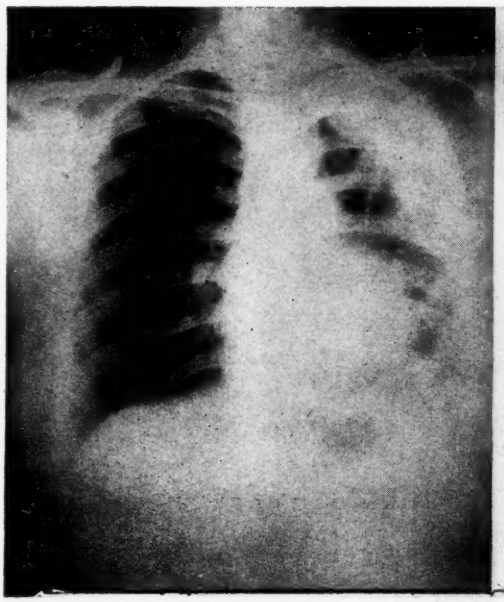

Figure 4. S.K. X-ray film shows presence of oleothorax in the left chest with partial collapse of left lung.

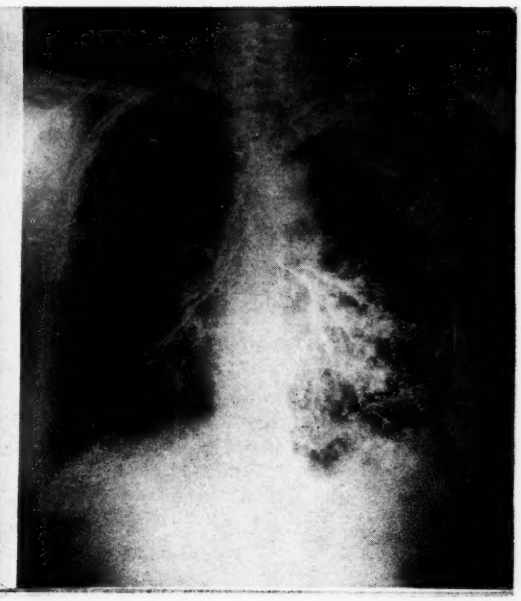

Figure 5. S.K. The above film shows cylindrical and saccular dilatation of the lingula division of the left upper lobe and bronchi of the left lower lobe.

case in 1932. Sputum was positive for tubercle bacilli. In April 1933 a left pneumothorax was instituted. It was discontinued in 1934 because of fluid. During the following year and a half several aspirations of fluid were performed followed by five refills to establish an oleothorax. Sputum conversion had occurred late in 1933 and remained negative. In August 1936 she had an hemoptysis and was readmitted to the sanatorium, remaining 9 months. During this time all sputum examinations were negative for tubercle bacilli. X-ray film of the chest in 1940 (Figure 4) showed presence of oleothorax in the left chest with partial collapse of left lung.

In January 1945 she was admitted to Michael Reese Hospital because of a history of recurrent bouts of cough and purulent sputum associated with upper respiratory infections. Bronchography with lipiodol showed bronchiectasis and purulent bronchitis in the fibrotic lung (Figure 5). She responded poorly to postural drainage and expectorants, but excellently to oral sulfathiazole and penicillin aerosol. Cough and expectoration ceased, and lung field appeared clearer.

Hemoptysis in cases of reexpanded pneumothorax or in post-thoracoplasty offers a problem in differential diagnosis of major importance. It is usually felt that the most likely source of the bleeding originates from a new tuberculous focus or the reopening of an old, apparently arrested focus. Much time elapsed in this case before a diagnosis of bronchiectasis and purulent bronchitis was made, and the bouts of hemoptysis related to it. Pneumothorax or oleothorax was not the direct cause of the bronchial disease. The fundamental process was due to bronchial obstruction followed by consolidation which in turn was followed by cavitation and bronchial damage. Had lipiodol studies been done prior to the institution of the pneumothorax, bronchiectatic changes would have been evident even then.

The symptoms of pulmonary emphysema are chronic cough which is frequently paroxysmal, expectoration of viscid, thick sputum, wheezing, expiratory dyspnea, and cyanosis. The chest shows a hyperresonant percussion note, and on auscultation the expiratory phase of the breath sound is prolonged, and there are sibilant or sonorous rales or ronchi. The x-ray film shows transverse ribs and widened rib spaces, increased translucency of the lungs, flattened and lowered diaphragmatic leaves, and a small narrow heart.

Case 4. B.L. This 63 year old white male first came under observation for pulmonary tuberculosis in September 1936 when an x-ray of the chest and sputum examination were positive. Following his discharge from the sanatorium in December 1937 he returned to his occupation of horse trading, and remained asymptomatic during the next 3 years. Late in 1940 he sustained an injury to his knee and

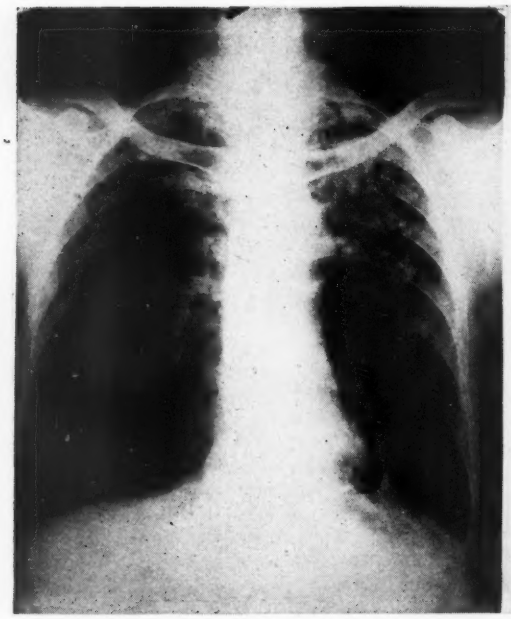

Figure 6. B.L. This film demonstrates the hard, nodular and fibrotic lesions of the left lung and upper portion of the right lung. There is marked flattening of the diaphragms, hyperillumination of the lower two-thirds of the right lung and base of the left lung with distortion of the cardiac shadow.

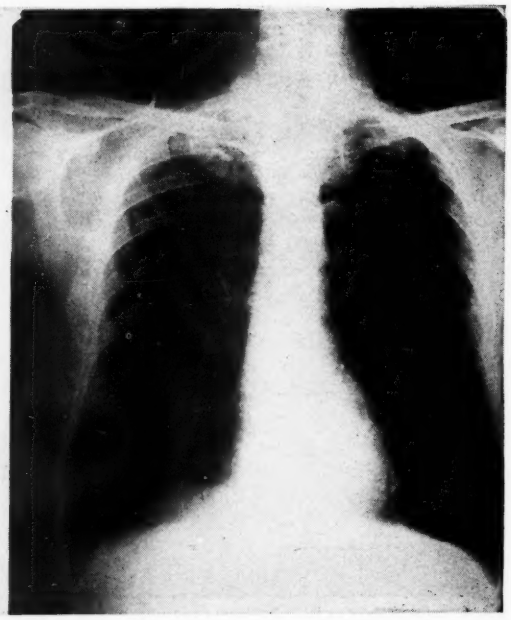

Figure 7. B.W. The above film taken in 1943 shows bilateral upper lobe infiltration, essentially productive.

upon recovery began to note dyspnea on exertion. This increased progressively so that for several months prior to readmission in December of 1944 he was unable to walk even short distances. Cough and expectoration had been minimal, but anorexia and weight loss of 23 pounds had occurred between 1938 and 1944. X-ray on admission in 1944 showed bronchiectasis, bronchitis, and emphysema in addition to tuberculosis (Figure 6).

In April 1945 it was felt that his improvement and negative sputum indicated early discharge from the sanatorium. He was able to tolerate eight hours of exercise. In September 1945, however, he complained of recurrent dyspnea on exertion and occasional spells of vomiting. Continued sanatorium care was required. In February 1946 he was placed on penicillin inhalation because of an acute episode of productive cough which was felt to be on a bronchiectatic basis. Marked improvement followed. In August 1946 following a regime of oxygen inhalation three times daily, postural drainage at bedtime, and aminophyllin there was some improvement in his dyspnea, orthopnea, and wheezing. A gain of weight also occurred. Sputum has been negative on concentration for the past 5 months. At present he is completely incapacitated and will require continued sanatorium supervision.

Case 5. B.W., white male, age 61. This patient was admitted to the sanatorium in April 1945 with a history of cough of 15 years duration. Five years prior to admission he noted marked weakness, and four years prior to admission the diagnosis of pulmonary tuberculosis was made following an episode of blood-spitting. In January 1945 his weakness and exertional dyspnea had increased to the point where it became necessary to give up his job. In February 1945 another episode of hemoptysis led to his hospitalization for the first time and subsequent transfer to the sanatorium.

On admission his x-ray showed fine nodular lesions in both upper lung fields, suggestive of hematogenous tuberculosis (Figure 7). Investigation of the genito-urinary system and spine failed to show evidence of an extrapulmonary lesion. Brochograms with lipiodol on December 1, 1945 showed bronchial infection on both sides with a moderate amount of cylindrical bronchiectasis on the left. The left main bronchus and that to the left lower lobe were angulated, indicating a retraction of the upper lobe on that side (Figure 8). Sputum has been persistently negative for tubercle bacilli, including a specimen collected on a laryngeal mirror. Penicillin aerosol was given with some improvement. In October 1946 increasingly progressive dyspnea was noted on slight exertion and following cough (Figure 9). Oxygen inhalation, aminophyllin, ephedrine, and vaponefrin gave some relief. At present he is markedly incapacitated and will require continued sanatorium supervision.

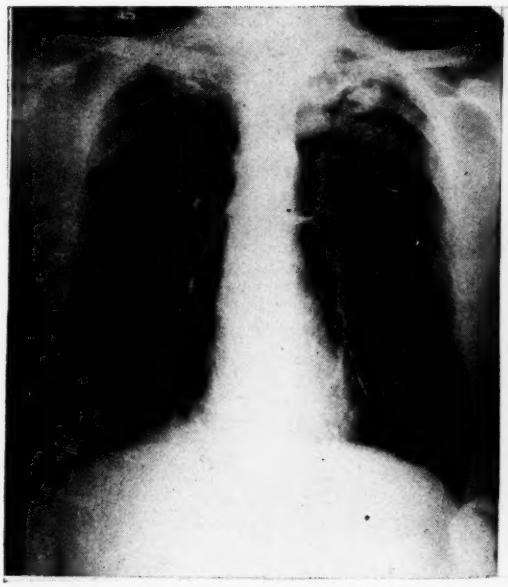

Figure 8. B.W. Bronchography shows moderate cylindrical dilatation of the bronchi of the lower lobes, especially on the right side.

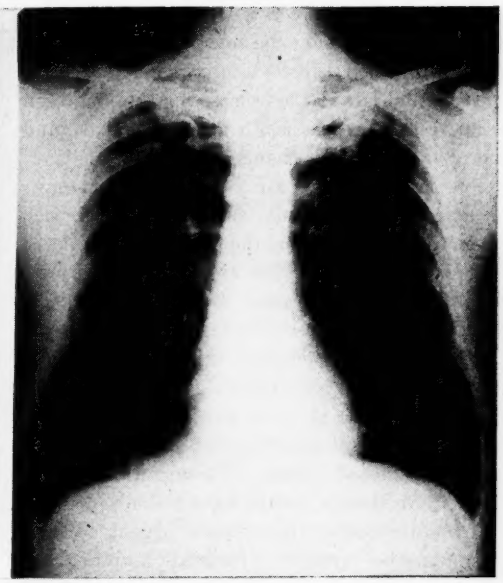

Figure 9. B.W. This film taken in 1946 shows no evidence of progression of lesions in the preceding three years. There has been, however, marked increase in emphyseatous changes.

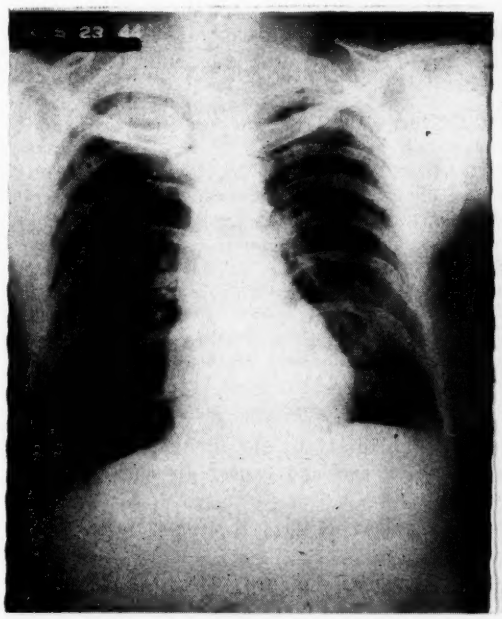

Figure 10. H.G. The above film shows a fairly well circumscribed density in the right upper lobe that is typical of old caseous pneumonic tuberculosis. There is minimal infiltration in the left upper lobe.

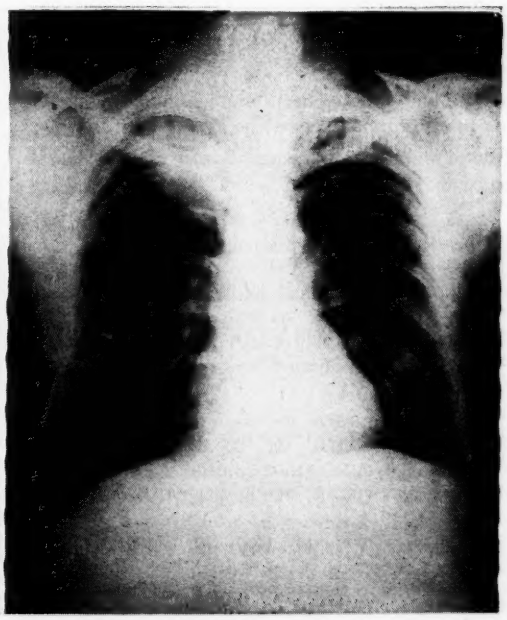

Figure 11. H.G. The above film shows the progression and enlargement of the right upper lobe density. Patient had had several hemoptysis prior to the time this film was taken.

In these cases there is a long-standing history of chronic cough and expectoration. The diagnosis of pulmonary tuberculosis was made early in one case and late in the other. Sputum had been negative for tubercle bacilli for long periods, and there had been no changes in the pulmonary lesions as seen in the x-ray film. The diagnosis of arrested tuberculosis was indicated in each patient. It is, however, the complications of the tuberculous infection that are of greater clinical importance in these cases. Both have responded excellently to non-specific measures, such as penicillin aerosol, vaponefrin inhalation, postural drainage, oxygen inhalation, and aminophyllin. Sanatorium care is no longer necessary from a public health standpoint or for the treatment of the tuberculous disease. Therapeutic management, nevertheless, would be extremely difficult at home in view of the frequent urgent needs of symptomatic therapy. General hospitals are very reluctant to admit this type of case once a tuberculous label has been attached. There is an urgent need for a better understanding of the therapeutic problems involved as well as use of the greater number of avenues of management available in a general hospital as compared to a sanatorium.

The early diagnosis of bronchogenic carcinoma should be based on a persistent dry, hacking cough, pain in the chest, and occasional hemoptysis in an individual past the age of 40. Dyspnea, loss of weight and strength are usually late findings.

Case 6. H.G., white male, fifty years of age. This patient had a known tuberculous history for some years prior to May 1944. An x-ray of the chest had shown parenchymal infiltration in both upper lobes, more marked on the right (Figure 10). In May 1944 he noted cough and expectoration of bloody sputum. Sputum was positive for tubercle bacilli.

He was admitted to the sanatorium where pneumothorax was instituted on the right side, but this failed to control his blood spitting. Neoplasm, complicating tuberculosis, was suspected. Bronchoscopy on July 1, 1944 showed no evidence of tumor, but blood was seen coming from the right upper lobe bronchus. A punch biopsy from the right upper lobe failed to reveal tumor cells, but one tubercle bacillus was seen. He was returned to the sanatorium where he continued to complain of coughing spells during which he expelled "tissue and red or black blood". His episodes of blood spitting increased to twelve times daily. (Figure 11) Tumor was still suspected, and bronchoscopy was repeated

Figure 12. H.G. Pathological specimen showing only a little normal lung tissue. There is extensive areas of carcinoma, and superiorly to this are multiple small caseous foci some of which represent definite cavities. These are areas of active tuberculous disease.

on October 9, 1944 in the presence of a good collapse of the right lung. No neoplasm or ulceration was encountered and no biopsy specimen was obtained. Exploratory thoractomy was done several days later and revealed a hard mass in the right upper lobe. Pneumonectomy was begun, but the patient expired on the operating table. Postmortem showed old, fibrous tuberculosis in the left upper lobe accompanied by severe brochiectasis. In the right upper lobe there was a bronchogenic, transitional cell carcinoma with much necrosis and tuberculous caseous foci. (Figure 12) Calcified tuberculosis of the lymph nodes was found.

This case illustrates the need to re-emphasize that tuberculosis and cancer are not mutually exclusive in the lung. That carcinoma of a bronchus may invade a contiguous tuberculous cavity has been well established by repeated x-ray and pathological studies. Hemoptysis in this case was the outstanding symptom. It was felt that it originated from the tuberculous cavity visualized in the x-ray. An adequate pneumothorax collapse, however, failed to control the repeated blood spitting. Such a failure should

always increase the suspicion of an associated malignant process. A punch biopsy was done after repeated bronchoscopic examinations failed to uncover the bronchial tumor. It is interesting that a single tubercle bacillis was recovered by this investigation; whereas, several previous examinations had been negative. The final diagnosis of bronchogenic carcinoma of the transitional cell variety was made at the time of the exploratory thoracotomy.

COMMENT

There has been a growing realization during the past several years of the need for re-evaluation of the pulmonary complications of a tuberculous and non-tuberculous nature in pulmonary tuberculosis. This is particularly important in patients whose tuberculosis is arrested or stationary. Many of these patients are negative sputum cases while many more are positive. They present difficult therapeutic problems; and, more important, their admission to sanatoria because of their pulmonary symptoms is generally considered urgent, often displacing cases with lesions more amenable to sanatorium care. The feasibility of providing care for the type of case whose symptomatology has a non-tuberculous basis in our general hospitals under simple isolation technics has been stressed in this paper.

Although bronchiectasis complicating tuberculosis has long been recognized as a relatively benign condition, several important studies by Dormer et al and Rilance have pointed out that in not an inconsiderable proportion a severe form of bronchiectasis co-exists. Boyer states that in a series of 50 cases studied by him, bronchiectasis was seen in 85% of the fibroid, 36% of the fibrocaseous, and none in the exudative. Many of these have been unrecognized, and the bouts of fever, cough, increased sputum or hemoptysis have usually been labeled as reactivation of the tuberculous lesion in the face of repeatedly negative sputum studies.

X-ray studies showed no changes in the tuberculous lesions from year to year. In Rilance's group five of the cases died of bronchial suppuration or of the complications such as non-tuberculous abscesses in the brain, liver, or kidneys. There is a need for lipiodol studies in every case of arrested tuberculosis with a negative sputum and a persistence of cough and expectoration or bouts of cough, expectoration, and malaise. Foul sputum and clubbed fingers are not an essential part of bronchiectasis. The concept of bronchiectasis as a long-standing chronic disease repeatedly found in our text books also cries for revision. Bronchiectasis is frequently an acute or subacute process of three to six months duration and requires active therapy.

Emphysema is closely allied etiologically to atelectasis, bronchiectasis, and pulmonary cavitation. In tuberculosis we have the basic factors of chronic bronchial obstruction, infection, and frequently bronchospasm. This obstruction can readily be demonstrated with lipiodol studies. Progressive trapping of air within the alveoli occurs followed by increasing distension and loss of elasticity. These sequelae are a direct result of a ball-valve mechanism in the bronchioli and alveolar ducts as has been demonstrated by Christie in experimental and clinical studies. Chronic cough adds abnormal stresses and strains to the alveolar walls as does the degenerative changes associated with the aging process and the fibrosis associated with inflammation. Treatment, especially oxygen inhalation, may possibly delay the further progress of the condition by preventing distension of the alveoli and consequent atrophy of the alveolar epithelium. The symptoms of emphysema, namely cough, wheezing, and dyspnea are usually assigned erroneously to the underlying tuberculous lesions. In several of our cases it was the disability associated with the emphysema that first brought the patient to the physician and led to the diagnosis of tuberculosis. The management of emphysema in the tuberculous is essentially the same as in the non-tuberculous. They may be cared for at home or in a general hospital where facilities for oxygen therapy and penicillin or streptomycin aerosol and bronchodilators are available.

The arrested case of pulmonary tuberculosis thus clearly shows the need for observation and management during his entire lifetime. His dismissal at the end of a short period of sanatorium care with the frequent recommendation "There is nothing to worry about" is as reprehensible as the same advice would be to a case of early or minimal lesion.

SUMMARY

The pulmonary complications of pulmonary tuberculosis, — empysema, bronchiectasis, and bronchogenic carcinoma have been discussed.

These complications raise diagnostic and prognostic difficulties, particularly in arrested cases of pulmonary tuberculosis. The need for lifetime management of the arrested case received particular emphasis. The feasibility of treating this type of case in a general hospital under simple isolation technics was also pointed out.

BIBLIOGRAPHY

1. Boyer, L. Bryce: "Bronchography in Pulmonary Tuberculosis"; **American Review of Tuberculosis; 54:** 111, 1946.
2. Christie, R. V.: "Chronic Hypertrophic Emphysema"; **Edinburgh Medical Journal; 46:** 463, 1939.
3. Dormer, B. A., Friedlander, J., and Wiles, F. J.; "Bronchography in Pulmonary Tuberculosis"; **American Review of Tuberculosis; 51:** 62, 1945.
4. Rilance, A. B., and Gerstl, B.: "Bronchiectasis Secondary to Pulmonary Tuberculosis"; **American Review of Tuberculosis; 48:** 8, 1943.

THEPHORIN A NEW ANTIHISTAMINIC

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The pharmacology of Thephorin, brand of phenindamine (2-methyl-9-phenyl-tetrahydro-1-pyridindene) was first reported by Lehmann et al[1] and preliminary reports on its clinical use have been presented by Davis and Mowry[2] and by Reynolds and Horton[3]. Its chemical structure differs from that of the other antihistaminics, and clinical reports[2,3] show a low incidence of toxic side reactions.

This paper describes our clinical experience in 142 cases. Thephorin was supplied to us* as sugar coated tablets, containing 25 mg. each and as a syrup, having 10 mg. per 4 cc teaspoon.

TABLE 1
Clinical results with Thephorin in hayfever

NO.	AGE	SEX	DOSE (mg)†	TIME OF THERAPY (weeks)	RESULTS	SIDE REACTIONS
1	3	M	10 t.i.d.	4	Good	None
2	5	F	10 b.i.d.	3	Good	None
3	5	M	10 b.i.d.	2	Good	None
4	6	F	10 b.i.d.	4	Good	None
5	6	F	10 b.i.d.	6	Good	None
6	14	F	25 t.i.d.	4	Good	None
7	15	F	25 t.i.d.	1	Failed	Gastric upset Insomnia
8	15	F	25 b.i.d.	4	Good	None
9	16	F	25 b.i.d.	4	Good	None
10	15	F	25 t.i.d.	4	Good	None
11	11	M	25 t.i.d.	2	Good	None
12	16	M	25 b.i.d.	6	Good	None
13	17	M	25 t.i.d.	3	Good	None
14	19	M	25 t.i.d.	8	Good	None
15	18	M	25/day	3	Good	None
16	11	M	25 p.r.n.	4	Good	None
17	15	F	25/day	3	Good	None
18	15	F	25 t.i.d.	2	Relief Partial	None
19	19	M	25 b.i.d.	4	Good	None
20	17	F	25 b.i.d.	4	Good	None
21	19	F	25/day	4	Good	None
22	15	M	25 t.i.d.	4	Good	None
23	14	F	25/day	4	Good	None
24	16	F	25 t.i.d.	6	Good	None
25	13	F	25 b.i.d.	6	Good	None
26	10	F	25 b.i.d.	6	Good	None
27	16	F	25 b.i.d.	4	Fair	None
28	10	M	25 t.i.d.	3	Good	None
29	12	F	25 b.i.d.	4	Good	None
30	15	F	25 b.i.d.	4	Good	None
31	25	F	25 t.i.d.	3	Good	None

†doses in multiples of 10 mg were given as Syrup Thephorin, all other doses were 25 mg tablets.

*Supplied by Hoffmann-La Roche, Inc., Nutley, New Jersey. Trade Mark Reg. U. S. Pat. Off.

Hayfever. Table 1 outlines the results obtained in 68 cases of hayfever. Thephorin was effective in 97% of these patients. There were 2 failures. The first of these failures (No. 7) was accompanied by insomnia and gastric distress. The second failure (No. 67) did not suffer any side reactions:

Hayfever and Asthma. Table 2 outlines the results obtained with 34 cases of hayfever and asthma. Thephorin was effective in controlling the symptoms of 91% of the patients suffering from both hayfever and asthma. There were 3 failures in this group. The first failure (No. 76) had side reactions of vomiting and hematuria. This patient had received 75 mg. Thephorin for one day only. The drug was discontinued and we were unable to determine if the hematuria was a true side reaction. None of the other 142 cases, some of whom received twice the dose given to case No. 76, had hematuria.

The second failure in this group (No. 91) experienced profuse sweating after taking 50 mg.

TABLE 1 (Continued)
Clinical results with Thephorin in hayfever

NO.	AGE	SEX	DOSE (mg)†	TIME OF THERAPY (weeks)	RESULTS	SIDE REACTIONS
32	25	F	25 t.i.d.	4	Good	None
33	26	F	25 t.i.d.	4	Good	None
34	23	M	50 t.i.d.	4	Good	None
35	26	F	25 t.i.d.	2	Good	None
36	22	F	25 t.i.d.	6	Good	Felt sick on first day only
37	21	F	25 t.i.d.	4	Good	None
38	29	M	25/day	4	Good	None
39	22	M	25 t.i.d.	4	Good	None
40	24	M	25 t.i.d.	8	Good	None
41	26	M	25 t.i.d.	2	Good	None
42	28	M	25 t.i.d.	6	Partial relief	None
43	28	F	25 b.i.d.	4	Good	None
44	34	F	25 b.i.d.	4	Good	None
45	32	F	25 b.i.d.	3	Good	None
46	35	F	25/day	4	Good	Felt "tired"
47	33	F	25 p.r.n.	3	Good	None
48	26	F	25 t.i.d.	2	Good	Sweating for ½ hr.
49	33	M	25-50 p.r.n.	4	Good	None
50	36	M	25 b.i.d.	2	Good	Gastric upset, insomnia
51	37	F	25 t.i.d.	4	Good	None
52	30	F	25 b.i.d.	6	Good	None
53	36	F	25 t.i.d.	4	Good	None
54	45	F	25 b.i.d.	6	Good	None
55	40	M	25 b.i.d.	5	Good	None
56	46	F	25 b.i.d.	6	Good	None
57	44	M	25 p.r.n.	4	Good	None
58	45	F	25/day	3	Good	None
59	44	F	25 t.i.d.	6	Good	None
60	48	F	25 b.i.d.	4	Good	None
61	46	M	25 t.i.d.	6	Good	None
62	40	M	25 t.i.d.	4	Good	None
63	48	M	50 t.i.d.	4	Good for first 3 wks.	None
64	50	F	25 t.i.d.	4	Good	None
65	53	F	25 t.i.d.	6	Good	None
66	50	M	25 t.i.d.	3	Good	None
67	58	M	25 t.i.d.	4	Failed	None
68	63	M	50 t.i.d.	6	Good	None

TABLE 2
Clinical results with Thephorin in hayfever and asthma

NO.	AGE	SEX	DOSE (mg)*	TIME OF THERAPY (weeks)	RESULTS	SIDE REACTIONS
69	6	F	10 t.i.d.	6	Good	None
70	7	M	25 t.i.d.	8	Good	None
71	10	M	25 t.i.d.	3	Good	None
72	13	M	10 t.i.d.	4	Good	None
73	14	M	25 b.i.d.	3	Good	None
74	13	M	25 t.i.d.	2	Good	None
75	20	M	25 b.i.d.	4	Good	None
76	21	F	25 t.i.d.	1 day	Failed	Vomiting Hematuria
77	24	M	25 t.i.d.	3	Good	None
78	26	F	25 t.i.d.	6	Good	Nervous Sleepy
79	28	M	25 b.i.d.	2	Good	None
80	30	F	25 b.i.d.	4	Good	Anorexia
81	31	M	25 b.i.d.	8	Good	None
82	30	F	25 b.i.d.	4	Good	None
83	34	F	25 p.r.n.	4	Good	None
84	35	F	25 t.i.d.	8	Good	None
85	40	M	25 t.i.d.	8	Good	None
86	44	M	25 t.i.d.	4	Good	Jittery
87	46	F	25-50/day	3	Good	None
88	46	M	25 t.i.d.	4	Good	None
89	47	M	25 t.i.d.	3	Fair	None
90	47	F	25 t.i.d.	2	Fair	None
91	48	M	50 p.r.n.	2 days	Failed	Profuse sweating
92	50	M	25 t.i.d.	3	Good	Frequent urination
93	51	M	25 q.i.d.	4	Good	None
94	52	M	25 b.i.d.	4	Good	None
95	60	M	25 p.r.n.	4	Good	None
96	6	M	10 b.i.d.	3	Good	None
97	8	M	25 t.i.d.	3	Good	None
98	14	F	25 t.i.d.	6	Good first 4 weeks	None
99	20	M	25-50/day	6	Good	None
100	32	M	25 t.i.d.	1	Failed	None
101	32	M	25 t.i.d.	1	Good	None
102	46	F	25 t.i.d.	4	Good	None

*doses in multiples of 10 mg were given as Syrup Thephorin, all other doses were 25 mg tablets.

The drug was discontinued after 2 days. The third failure (No. 100) used 75 mg. daily for one week with no relief or side effects.

Asthma. Table 3 presents our results in 16 cases of asthma. Of these cases, 7 were bronchial asthma (No. 106-112); 3 were pollen and grass asthma (No. 113-115); 3 were grass asthma (No. 116-118) and there was one case (No. 119) of pollen and dust asthma.

Treatment was effective in 75% of all cases of asthma. All of the failures occurred in bronchial asthma. The drug was 100% effective in pollen and grass asthma. None of the patients with asthma experienced any side reaction. The effectiveness in case No. 104 is of particular interest since this child, two and one half years of age, received 10 mg. of syrup daily for three weeks with good results and no sign of any side reaction.

Vasomotor Rhinitis. Thephorin was used in 10 cases of dust vasomotor rhinitis and was effective in eight cases. Some patients reported relief in 15-20 minutes after taking the drug. The dosage used was 25 mg. two or three times a day. While one of the two failures had no side reaction, the other experienced insomnia.

Dermatitis. Thephorin gave good results in 9 of 10 cases of various types of dermatitis. The

TABLE 3
Clinical results with Thephorin in Asthma

NO.	AGE	SEX	DOSE (mg)*	TIME OF THERAPY (weeks)	RESULTS	SIDE REACTIONS
104	2½	M	10 t.i.d.	3	Good	None
105	8	M	10 t.i.d.	2	Good	None
106	40	F	25 t.i.d.	4	Good	None
107	43	F	25 t.i.d.	3	Failed	None
108	46	M	25 t.i.d.	4	Good for 3 weeks	None
109	56	M	50 t.i.d.	3	Failed	None
110	63	M	25 t.i.d.	3	Failed	None
111	63	F	25 t.i.d.	12	Good	None
112	63	M	25 t.i.d.	8	Failed	None
113	15	M	25 t.i.d.	3	Good	None
114	27	F	25-50/day	8	Good	None
115	34	F	25 t.i.d.	3	Good	None
116	11	F	25 b.i.d.	5	Good	None
117	18	F	50-75/day	8	Good	None
118	34	F	25 p.r.n.	3	Good	None
119	38	M	25 t.i.d.	8	Good	None

*doses in multiples of 10 mg were given as Syrup Thephorin, all other doses were 25 mg tablets.

only failure was in a case of chronic urticaria. This patient received 75 mg. daily for 4 weeks without any benefit or side reactions.

Other conditions. Two cases of migraine headache were studied. One patient used but one 25 mg. tablet, experienced no relief and complained of numbness in the extremities. The other patient took 50 mg. as needed for 4 weeks and had a fair response with no side reactions. One case of sinusitis took 25 mg. twice daily for 16 weeks with a good response and no side reactions. Hayfever and dermatitis occurring simultaneously in one case, gave a good response with no side effects to 25 or 50 mg. per day.

Discussion: Of 142 patients treated, beneficial results were obtained in 129 cases, or almost 91%. While it is not expected that this high degree of effectiveness will be found in all forms of allergy, it is indisputable that in this group of unselected cases, the drug has demonstrated its value as an antihistaminic. Its relative freedom from side effects is of at least equal importance. An analysis of the side reactions observed are listed as follows, (the number after each symptom indicates the number of cases.):

Gastric disturbance 5
Insomnia 3
Nervous or jittery feeling 2
Sweating 2
Fatigue 1
Sleepiness 1
Anorexia 1
Hematuria 1
Frequency of urination 1
Dyspnea 1
Numbness of extremities 1

These symptoms were seen in a total of 15 patients, this is approximately 11% of all cases. Thephorin, with an incidence of side reactions of only 11% compare favorably with the other antihistaminics. Feinberg[4] reported that "more than half of the patients taking 50 mg. doses of Benadryl complained of untoward effects . . . . . the side reactions from Pyribenzamine occur in less than 25% of the patients". The figure of 11% for side reactions is a true indication of the low toxicity of Thephorin, for in only 5 cases were these symptoms severe enough to cause the discontinuation of therapy. We can, therefore, say that of 142 cases, only 3.5% had to stop using it because of side reactions.

Summary

1. A report on the use of Thephorin in the treatment of 142 cases of allergy has been presented.
2. Thephorin was 97% effective in relieving the symptoms of hayfever and 91% effective in the treatment of hayfever and asthma.
3. Thephorin was of definite value in the treatment of asthma, dermatitis, vasomotor rhinitis and other conditions due to allergy.

4. The most common side reactions observed were gastric disturbance and insomnia.
5. The incidence of side reactions to Thephorin was 11%, but only 3.5% of all cases had to discontinue the drug because of side effects.

REFERENCES

1. Lehmann, G., E. Hagan, G. Barbarow, M. Roe. Federation Proc. 6 No. 1, 350, 1947.
2. Davis, H. P. and W. A. Mowry, "A Preliminary report on the use of Nu-1504". Read before the Chicago Society of Allergy, May 19, 1947.
3. Reynolds, J. L. and B. T. Horton, Proc. Soc. Clin., Res. 20, 83, 1947.
4. Feinberg, S. M., J.A.M.A. 132, 702, 1946.

TULAREMIA AND UNDULANT FEVER TREATED WITH ATABRINE

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URBANA

The purpose of this report is to make known some favorable results obtained in the treatment of tularemia (*Pasteurellus tularensis*) and undulant fever (*Brucellus abortus*) with the drug atabrine dihydrochloride. This drug was used after other treatments had failed. It has thus far given positive results for both diseases in every case in which it was used by the senior author. Although the number of cases subjected to the drug has been small, the findings seem significant enough to be reported here. To our knowledge this is the first report of the use of atabrine to combat either of these pathogenes.

TULAREMIA

Case I: — Mrs. H., age 65, came for treatment in November, 1943. At the time of examination by the senior author, Mrs. H. was suffering with fever and chills. She had an ulcer on her right thumb, and the lymph gland under her right arm was considerably enlarged and very tender. These symptoms strongly suggested a case of ulcero-glandular tularemia.

The history of the case revealed that Mrs. H. had consulted another physician when she first became ill. For two weeks the other physician treated her for the "flu," but she did not respond to treatment (treatment unknown). Further inquiry brought out some important facts: She had dressed some freshly killed wild rabbits (cottontails) about three weeks previously — about a week before her illness started. Two or three days after she had dressed the rabbits, a primary papule developed on the right thumb. This papule would not heal and developed into the persistent ulcer noted above. The lymph gland had become enlarged soon after the papule started "growing" and was as persistent as the ulcer. It was at the time when the papule started to enlarge — about the fourth day — that the first chill was experienced.

With the above chain of events known and with the characteristic tularemia symptoms present, there could be little doubt that Mrs. H. had a case of ulcero-glandular tularemia.

A supply of 1.5 grain atabrine tablets was given to her with instructions to take one tablet three times daily for five days. At the end of the fifth day, Mrs. H. reported back for examination. She said that the chills and fever had left on the second day with no recurrence. Examination showed lymph glands were normal and the ulcer was nearly healed, with no infection evident. She has had no recurrence of the symptoms since.

Cases II, III, and IV: — Mrs. K., age 40, and her two children, ages 9 and 12, came to the office together in December of 1944. All three patients had the specific symptoms of ulcero-glandular tularemia — ulcers on their hands, lymph gland swellings, fever, and chills. Again the history confirmed the suspicion of tularemia.

Two weeks previous to examination, Mrs. K. had dressed some cottontail rabbits which her husband had shot. The children assisted in cleaning and skinning the rabbits. No protective measures (use of rubber gloves, etc.) were taken. Inside of a week's time all three had developed primary papules on their hands. The papules persisted and enlarged into ulcers. As the ulcers formed, the lymph glands closest to the respective ulcers became enlarged and tender. In each case chills and fever ensued soon after the primary papules started to enlarge.

The same treatment as above was prescribed — three 1.5 grain atabrine tablets daily for five days. In addition, iodized salve was given for external application to the ulcers.

The patients later reported that the chills and fever left "immediately" after starting treatment and the ulcers were healed by the sixth day. No further treatment was required.

In the past three years the senior author has had a total of eight patients who showed the typical symptoms of ulcero-glandular tularemia as described above. Every case was traced to the handling of rabbits a few days before. The characteristic chain of symptoms followed. All eight of these cases were treated in the same manner as already described. Without exception, atabrine produced a favorable response within one to three days and not one case required further treatment after the fifth day. In none of these cases has there been a recurrence of symptoms.

The tularemia cases were not confirmed by laboratory tests but it is pointed out that clinical diagnosis of ulcero-grandular tularemia is reasonably accurate, especially when the symptoms can be directly associated with the source of in-

fection. Jackson (1946) points out that from a total of 123 clinical diagnoses of tularemia in Indiana between the years 1942 and 1946 only eight cases gave negative laboratory findings and the remainder (115) were positive.

UNDULANT FEVER

The good results obtained by the senior author in combatting *P. tularensis* with atabrine dihydrochloride prompted him to test the effects of the drug on *B. abortus*. Only four cases of undulant fever have been treated thus far, but the results are very encouraging.

Case I: — Mr. V., age 17, came to the office for examination on or about June 20, 1944, at which time he was having chills and fever, and was malaise. A blood sample was sent to the Illinois State Laboratory of Public Health at Springfield. The physician's report No. 79195 from Springfield dated June 22, 1944, showed typhoid negative, and undulant fever positive in a dilution of 1-160.

This patient gave a history of having had malaria (not confirmed by blood smear test) several years before and having been treated with quinine. No malaria was detected at the time of undulant fever diagnosis. It was learned that the patient's father was in the dairy business and delivered unpasturized milk from a "tested" herd of Guernseys. The patient had regularly drunk the unpasteurized milk.

After making the diagnosis of undulant fever, the State Department of Public Health sent a representative to check the dairy herd. "Bang's disease" was found and the entire herd was destroyed.

After failing to get any favorable results with other treatments, the senior author instructed the patient to take an atabrine tablet morning, noon, and night for five days. The fever left on the third day, and no further treatment was given after the fifth day.

Mr. V. has had no recurrence of symptoms since the "round" of atabrine in 1944. He has had three blood agglutination tests — one at the state laboratory and two in naval laboratories — since 1944, and all three have shown a negative reaction to *B. abortus*. Mr. V. has been a member of the U. S. Marine Corps for the past two years.

Case II: — Mrs. S., age 52, was examined on May 1, 1942. She complained of chills and fever, was malaise, and had painful swellings in the joints. A blood sample was sent to the state laboratory and a positive report of undulant fever in a dilution of 1-160 was returned.

Mrs. S. was questioned as to whether she had ever had malaria or typhoid, to which she answered no. It was learned that several years before she had used unpasteurized milk. From that time until this examination she had been "feeling badly" and had been intermittently attacked with chills and fever.

Atabrine was given for this case in the exact dosage as had been used before. The chills and fever left almost at once and the swellings in the joints subsided on the fourth or fifth day. In the patient's own words she "felt wonderful." A second blood agglutination test sent to the state laboratory at this time was returned as negative to undulant fever.

No recurrence of symptoms was evident until December, 1947, at which time Mrs. S. began to have some chills and fever as before. She reported almost immediately to the office of the senior author. Again atabrine was prescribed, and again the symptoms disappeared in two or three days after start of the atabrine treatment.

An agglutination test returned from the state laboratory on January 1, 1948 (sent in before atabrine treatment started), was positive to undulant fever in a dilution of 1-160. A post treatment test has not been made at the time of this writing, April 8, 1948.

Case III: — Mrs. B. was in the office on or about November 1, 1945. She was having her first attack of chills and fever. A blood sample was immediately sent to the state laboratory to which a return of positive undulant fever in a dilution of 1-160 was returned. The standardized atabrine treatment was given, to which Mrs. B. had a rather slow response. She noted no reaction from the drug until the fifth day of treatment, at which time the fever and chills suddenly subsided. The second blood sample was then sent to the state laboratory and on December 7, 1945, a return of negative undulant fever and negative typhoid was received. Mrs. B. has had no recurrence of symptoms to date.

Case IV: — Man, age 34, in dairy business, came to the office with chills and fever. He was very malaise. Clinical diagnosis was undulant fever, but no agglutination test was made. He was given a supply of atabrine and the proper directions for its use. Since the man never returned for a "check-up" it is presumed that the atabrine accomplished the cure.

As the facts in this case are rather obscure, we must consider it as doubtful. It is mentioned because the man's contact with cattle suggests the possibility of undulant fever.

SUMMARY

All of the above cited cases of tularemia and undulant fever were examined and treated in the senior author's office, and the facts of each case were carefully recorded because of their apparent significance. None of the patients was able to afford streptomycine nor was the drug available in most cases. Experimentation with atabrine has given us very favorable results in all cases of tularemia and undulant fever in which it was used. It is now a question of whether this treatment will give positive results when extensively used. It is our hope in offering this article for publication that more cases of tularemia and undulant fever will be treated with atabrine in an effort to establish the exact value of the drug as a combatant of these two pathogenes.

CONCLUSIONS

Eight cases of tularemia (*P. tularensis*) and four cases (three positive and one doubtful) of undulant fever (*B. abortus*) have been successfully treated with atabrine dihydrochloride. A recurrence of symptoms has occurred in none of the tularemia cases, and only one recurrence of undulant fever was noted — this after an interval of nearly five years. The treatment was one 1.5 grain atabrine tablet three times daily for a total of five days.

REFERENCE

Jackson, J. W. 1946. Tularemia in Indiana Including a Reported Industrial Outbreak — Presented at the Seventy-fourth Annual Meeting of the A.P.H.A., Thursday, 11-14-46. (Mimeographed Report)

ORGANIZATION OF A BLOOD BANK

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Before discussing a blood bank for a modern hospital and the organization of such a blood bank, I think it would be worth reviewing some of the scientific discoveries and advances in this field in the past decade. A great deal of work has been done on many aspects dealing with blood, and I want to touch on some of the highlights that have resulted in changes in handling blood for the patient. I want to bring out the important things that make a bank practical and help to make blood transfusion a safe procedure, and then I shall discuss the organization of a blood bank.

First, experimental work and clinical studies dealing with the loss of blood and fluids that leads to anoxia and shock have established two outstanding facts. One is the value of quantitative blood replacement, and in severe hemorrhage with shock a great deal of blood is required. This was shown in many experimental studies on animals and certainly was confirmed by a vast experience during the war in which extensive blood transfusion permitted a type of surgery which ten years ago would have been impossible. The second important thing is the necessity for speed. Rapid and extensive loss of blood leads to anoxia of the tissues. Shock may develop very rapidly, and if it becomes irreversible no amount of blood will be of help. So, in our present concept of utilizing blood, we have two important considerations: (1) to have enough blood available to replace what the patient has lost, and (2) to administer it to the patient without loss of time.

Another thing that we must consider is the various types of blood preservatives and anticoagulants. When the Russians first published their work on cadaver blood, the outstanding thing was the departure from the custom of using fresh blood. They stored the blood in a refrigerator. It was subsequently shown that ordinary sodium citrate solution could not preserve blood satisfactorily. A great deal of work has been done and anticoagulants developed in which blood is well preserved in the refrigerator. The most commonly used preserving anticoagulant is acid-citrate-dextrose solution. Both experimental work, using radioactive iron, and clinical experience in the war have shown that blood drawn into this solution may be stored for three weeks and that the cells remain in the circulation for a satisfactory length of time after transfusion. This solved the question of storing blood.

Finally, I should like to say a few words about the Rh antigen. I must mention this subject, because it has radically changed the technics and operations of a blood bank in the handling of blood for patients. You are aware of the relationship of the Rh antigen to hemolytic reactions in patients who receive multiple transfusions and in obstetrical patients. The discovery of this antigen, its role, and its ability to sensitize an individual, has made blood transfusions much safer. Those of us who have been long in this field can remember occasional patients to whom group-for-group, apparently compatible blood was given and in whom a hemolytic reaction occurred. The discovery of the Rh antigen, however, is not an unmixed blessing. It has introduced complications and many difficulties for the laboratory worker. Clinicians are not aware of the problems involved in training technicians for careful work of very elaborate and delicate testing which may be required.

In addition, I want to mention briefly that there have been improvements and refinements of technics for making solutions non-pyrogenic and glassware and infusion equipment non-pyrogenic

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so that pyrogenic reactions can be reduced. This is important because if the reaction risk is great the clinician will hesitate to give blood. By eliminating most reactions due to extrinsic causes, blood transfusion can be made so safe that there should be no hesitancy in using blood.

A modern hospital must provide all types of blood. This must be immediately available, and it must be non-reaction-producing. How can this be accomplished? First is the appointment of a competent supervisor. Such a supervisor should be preferably a medical man. He should have complete authority over all aspects of blood transfusion work, starting from the solutions preparation and testing, and including the examination of the donor, bleeding the donor, testing the blood, and preparation of the transfusion equipment. All aspects of the work should be his responsibility. It is the only way to achieve the best type of service. I firmly believe that such a supervisor should make the blood transfusion service a first order of business and not a side issue. Transfusion work at the present time is a chain of procedures, all of which are important. Every link in that chain must be well controlled. The supervisor should have everything under his control. It should be his responsibility to check equipment, train personnel, supervise the personnel, and investigate transfusion reactions so that he can eliminate their cause. The ideal setup would also include an infusionist.

Blood should be stored on the premises of the hospital. How extensive the bank should be and how many blood groups should be stocked depend upon the size of the institution and the number of bloods that are used in a week or a month. It may not be feasible to store some of the very rare blood types because of infrequency of use. It is for that reason that there should be a reserve blood depot or blood bank, or a collaborating blood bank, in every community. Even though the average transfusions in a hospital number ten a week, there may be one day in which ten transfusions are given — so, a reserve bank is necessary to supply acute needs for blood. Secondly, even though only ten transfusions are used in the hospital per week, one severe hemorrhage patient of an uncommon blood group will require the aid of a reserve bank.

Every effort should be made by the man in charge, cooperating with the clinical staff, to have the patient's friends or relatives replace the blood in the bank. The average income and outgo of blood will balance off, as a rule.

It is very important to have proper quarters for a blood bank. The work involved with transfusions has increased, and proper working conditions are essential. Every effort should be made to put the blood donor at ease. It is desirable to have a pleasant waiting room and a proper venesection room. It helps reduce adverse effects of venesection if the donor can recuperate in a room after he has given blood. Proper quarters for the technicians are also important, because errors occur more frequently in a crowded laboratory.

Care should be exercised to select personnel who are conscientious. We cannot have mistakes in blood transfusion work. Many other laboratory procedures can be repeated, but a mistake in blood grouping may be fatal. Conscientiousness is a very important qualification. The technician must be trained well in all the aspects of blood immunology. The technician must be impressed with the fact that if something bizarre occurs it should be promptly referred to the supervisor.

Equipment is very important. It makes the work easier for the technician and provides accuracy and security for the blood bank. Time does not permit discussion of all the details of equipment, but every precaution must be taken to safeguard the blood.

Every female patient and every patient who will receive multiple transfusions should be Rh-tested and should be given the proper Rh-group blood. It is wise to give group-for-group blood to every patient, and I think that ultimately we may come to that. Every hospital with an obstetrical service should be prepared to do Rh determinations.

We cannot have too many safeguards in blood transfusion work. Even with good, conscientious, trained technicians and good equipment, mistakes do occur. I recommend double checking by two individuals using two different sera. This is especially important with Rh work. In this way we can safeguard accurate identification of blood.

Every institution wants to operate efficiently and economically. When it comes to blood, it is too valuable an agent, and the risks are too great, to place economy foremost. I think the patient's welfare should be considered first. The patient should get the best blood possible. Economy must be a secondary consideration in the operation of a blood bank.

CHOOSING THE THERAPY FOR THE BREAST CANCER PATIENT

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The title of this paper may, at first glance, seem paradoxical, since no new miracle drug has been discovered which is a cure for breast cancer. The old reliable methods of treatment, namely, surgery and radiation therapy, are still the best we have to offer the patient suffering from carcinoma of the breast.

And yet, it appears to this writer that we have, in the main, not made the best usage of these modalities. There has been much divergence of opinion in the profession. Some surgeons argue that operation alone should be done, and disparage the value of radiation therapy in any but the hopelessly advanced cases. These, fortunately, are few in number. On the other hand, some radiologists decry any attempt at surgical intervention in breast carcinoma and insist that radiation therapy alone is the treatment of choice. It is equally fortunate that these are in the minority.

We find surgeons divided into two camps, one group favoring radical mastectomy in the majority of cases, while the second group, in what appears to be a defeatist attitude, advocate only simple mastectomy. This latter group encompasses many surgeons of great renown, and their thinking and writings have influenced many lesser lights to follow their leadership. Obviously, one group cannot be entirely right and the other altogether wrong. I am reminded of the controversy which raged, only twenty or so years ago, between the "Cholecystectomists" on the one hand, and the "Cholecystostomists" on the other. Experience, and the passage of time, have proven that one form of surgical treatment of the diseased gall bladder is not applicable to all cases, and that the ultimate form of surgical management will depend upon the conditions found at operation in each individual patient.

Haagensen[1] states without equivocation that "in the face of the proved fact that cancer of the breast that has metastasized to the axilla has been cured by radical mastectomy, the performance of simple mastectomy in a patient who can tolerate a radical operation is nothing less than surgical cowardice". This opinion has been gaining ground in recent years. Sufficient evidence has been accumulating in the publications of various clinics throughout the country to substantiate this opinion, and it should be accepted as axiomatic. In the Breast Tumor Clinic of Cook County Hospital, we have seen countless cases of recurrence in the scars, skin adjacent to the scars, and pectoral musculature, where only simple mastectomy has been performed.

Why, then, in the face of the mounting and incontrovertible evidence proving the inadequacy of simple mastectomy, should so many surgeons still be using this technique? I have talked with many surgeons on this subject and many have expressed themselves to this effect: "I have performed many radical mastectomies, only to see these patients develop metastases which lead to death. What is the use of doing radical mastectomies?"

It is my sincere belief that many of these men had done radical mastectomies inadvisably, namely, in patients where the breast carcinoma had progressed beyond the stage where radical surgery offered any hope of a cure. Many of these surgeons evaluate the status of their patients with breast cancer in a very haphazard fashion. They follow no set routine of studying each individual patient, nor do they make any concerted effort to determine whether the breast cancer has spread beyond the confines of the affected breast, and, if so, to what extent.

This criticism is certainly not applicable to all surgeons. It does not apply to the men working in the large clinics and in groups where patients, as a rule, are carefully studied and "worked up". But it does apply to the large number of surgeons operating as individuals in the thousands of smaller hospitals, the men who see an occasional

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From the Breast Tumor Clinic of the Cook County Hospital. The opinions expressed herein represent only those of the author, and do not necessarily represent the opinions of the other members of the surgical staff of the Cook County Hospital.

patient with breast cancer; and these men, in the aggregiate, perform a large number of mastectomies. Their routine procedure is about as follows: they see a patient with a lump in the breast. She is sent into the hospital and submitted to an excision of the mass (often an incision into the mass.), and a frozen section is made. If the report from the surgical pathologic laboratory is positive for malignancy, a mastectomy, often a radical one, is done. No attempt has been made, preoperatively, to do any x-ray study of the chest, skull, spine and pelvis to rule out metastases. The patient's blood picture, and plasma proteins have often not been carefully studied, with the result that many patients go into irreversible shock resulting from hemorrhage. Often the blood transfusions which follow are "too little and too late".

And with this sort of "hit or miss" procedure, the percentage of recurrences and metastases will be high. Is it any wonder, then that the operation of radical mastectomy is condemned by these men as being ineffectual?

If the surgeon will, through inspection and careful palpation, elicit as much information about each mass in the breast as he possibly can, he should be able to make a fairly and reasonably accurate clinical differentiation between a benign and a malignant tumor. If there is a reasonable suspicion that the mass in the breast is malignant, the patient is then carefully studied for possible metastases. If any metastases other than to the homolateral axilla are discovered, the patient should not be considered as "surgically curable" at this time, and palliative therapy should be instituted.

Recent studies by Low-Beer[2] on the use of radio-active phosphorus, P-32, as a diagnostic procedure for breast carcinoma, are encouraging. We are carrying on a study in our clinic now of P-32 as a diagnostic agent, and shall report on it in the near future. This method may ultimately eliminate the necessity for a needle or excision biopsy, and we may be enabled to make an accurate pre-operative diagnosis and plan the type of therapy well in advance of operation.

Patients with breast cancer who are considered inoperable should be treated either by palliative simple mastectomy, to relieve them of the pain and the foul discharge which accompanies ulceration, or by x-radiation, or a combination of both. *Radical mastectomy in these cases is unnecessary and foolhardy.*

Within the past few years, considerable work has been done by Farrow and Woodward[3], and by Adair and Herrmann[4, 5, 6, 7, 8], and others, on the use of hormones, both estrogens and androgens, in advanced breast carcinoma, principally of the recurrent and metastatic types. While it may as yet be too early to evaluate the worth of stilbestrol for soft tissue metastases and testosterone for bony metastases, the reports to date are not too discouraging. We may have another effective weapon, in the form of the hormones, in our battle against breast carcinoma.

Classification Of Breast Carcinoma — There have been so many classifications of breast carcinoma, based principally upon histologic type of the growth, that a state bordering upon confusion exists. Almost every textbook of Pathology and Surgery contains a classification which is slightly different from every other one. Broders' classification into Grades I, II, III, and IV is perhaps the most universally accepted. This, of course, is based upon the peculiar characteristics of each particular carcinoma, as revealed by the microscope.

In our clinic, we have adopted as a simple working histologic classification the following: 1) Scirrhus, 2) Adeno-carcinoma, and 3) Medullary, going from the least malignant to the most highly malignant in this order.

What is more important, however, is that breast cancers should be classified according to their stages of advancement. The following classification is the one we have adopted in the Cook County Hospital Breast Tumor Clinic:

Stage A — limited to the affected breast

Stage B — limited to the affected breast and homolateral axillary glands

Stage C — involvement of one breast (with or without homolateral axillary nodes) plus supraclavicular nodes, homo- or contralateral

Stage D — Stage A (with or without Stages B and C) plus involvement of opposite breast

Stage E — Stage A (with or without Stages B, C, or D) plus distant metastases, to thoracic cavity, skull, spine, liver, or pelvis

Stages A and B are considered surgically curable, whereas Stages C, D, and E should be treated palliatively only. In many instances, following intensive radiation therapy, we have seen Stages C, D, or E reversed to Stages A or B. This, however, is rare.

An attempt is made to classify every patient, once a clinical diagnosis of malignancy of the breast is made, as soon as possible. Involvement of the axilla, supraclavicular nodes, or of the opposite breast, can usually be determined at the first examination. Then, the patient is sent to the x-ray laboratory for a complete study, which should include stereoscopic films of the skull and chest, one film for rib detail, serial films of the vertebral column, and a film of the pelvis.

The results of a careful physical examination, plus the x-ray findings, enable us, with a reasonable degree of accuracy, to classify the patient from a clinical standpoint.

Criteria Of Operability. — In general, all patients who fall into our classification of Stages A and B are considered as "operable," in the sense that there is hope for a radical cure. All the others are not suitable candidates for radical mastectomy.

Geschickter[9] lists the following as the most reliable criteria of inoperabilty:

1) Lymph node metastases to supraclavicular region

2) Skin metastases beyond the area immediately adjacent to the tumor

3) Acute or inflammatory carcinoma

4) Carcinoma developing in full-term pregnancy

5) Evidence of internal of visceral metastases

6) Extensive fixation of the tumor to the chest wall or tumor nodules in the chest wall

7) Extensive edema of the skin over the breast or of the arm

8) Considerations in regard to the general condition of the patient, such as severe hypertension, cardiac or renal disease, advanced age, etc.

Haagensen and Stout[10] in their consideration of the criteria of operability, agree almost entirely with Geschickter's classification. It can be readily seen that the Stages C, D and E of our classification, which we consider inoperable, fit in well with the above classification.

Combined Surgery And Radiation Therapy. — One is treading upon extremely controversial ground when attempting to discuss this subject. Many surgeons are of the firm belief that in Stage A breast carcinoma, radical mastectomy, without any x-radiation, either pre- or post-operatively, is indicated. This writer does not agree with this view, and subjects all his patients, both clinic and private, to radical mastectomy and x-radiation. We have seen far too many patients who have had surgery alone, even though adequately performed, develope metastases and locally recurrent nodules. In our experience, the percentage of these recurrences is definitely less when x-radiation has been combined with radical mastectomy.

Most men are agreed that patients with Stage B carcinoma should have combined surgery and radiotherapy. There is much divergence of opinion, however, as to how these should be combined. Many prominent surgeons have discarded completely preoperative irradiation, stating that it is of little or no value. One of the Editors of the Quarterly Review of Surgery[11] in commenting upon an article dealing with breast carcinoma, stated that "The majority of surgeons interested in carcinoma of the breast have given up routine pre-operative x-ray therapy in operable lesions. Certainly it would seem very desirable in the post-operative treatment, particularly in those cases with axillary involvement. X-ray therapy is definitely indicated, however, in the inoperable case, and most surgeons admit that now and again it will convert the inoperable into an operable lesion".

On the other hand, there are statistics which would seem to indicate that pre-operative irradiation is of definite value in selected cases. In a study which has been conducted in our clinic during the past five years, the report of which is now in preparation[12], we have concluded that pre-operative x-radiation is of value, especially in those breast carcinomas which are radiosensitive, such as the highly anaplastic medullary type. We have had several cases, proven by needle biopsy to be medullary carcinomas, which we subjected to an intensive cancericidal dose of 7500 R, where the tumors melted down so that they could neither be felt, pre-operatively, nor found in the resected breasts after operation.

These patients are alive, with no signs of recurrence, three years after radical mastectomy.

It is probably not necessary that one become an "all-out" protagonist of either pre- or post-operative x-radiation, as long as the therapy is given. I consider it very important, however, that the surgeon and the radiologist work together as colleagues, with unity of purpose, rather than as competitors. Just as the roentgenologist is eager for clinical information about the patient, so that he may better interpret the shadows he sees, so also will the radiologist benefit from the information which the surgeon can give him. If the radiologist knows something about the size of the mass, its location, duration of symptoms, whether axillary glands were found, the histologic type, etc., he can plan his therapy more intelligently. A personal consultation between surgeon and radiologist should be a part of every referral of a breast cancer patient for radiation therapy.

Patients may be referred to the radiologist as early as the fourteenth day following radical mastectomy, provided the radiogist understands that he is to irradiate all the other portals, axillary, supraclavicular, posterior mediastinal, etc., and not touch the scar area for a few additional weeks.

Follow-Up Treatment. — All patients with breast carcinoma should have follow-up observation for prolonged periods of time. Unlike the patient who has had a cholecystectomy or a hysterectomy, and who may be safely discharged by the surgeon after several months, the patient who has had a mastectomy for carcinoma of the breast should, theoretically, never be discharged from observation. Our practice is to see the patient every four to six weeks for the first six months, and every eight to ten weeks during the next six months. They are seen every three months during the second year, and semi-annually thereafter. It goes without saying that these examinations should be searching and thorough. One should develop a standardized routine of examination to include the area of the scar, both axillae and supraclavicular regions, the remaining breast, the entire chest wall, and the abdomen over the liver. The patients should be questioned as to whether they are coughing, or having any back pain. I think that I perhaps bend over backwards in insisting that all my patients have an x-ray check-up of the skull, chest, spine and pelvis every six months following mastectomy. But, in addition to the information derived by the examiner from this procedure, the patients seem to benefit from the assurance that no metastases exist, and their morale is improved.

And, occasionally, early pulmonary or skeletal metastases are discovered, which might otherwise have been missed; and suitable therapy, whether irradiation or endocrine, or a combination of both, can be instituted with definitely beneficial results to the patient.

SUMMARY AND CONCLUSIONS

1. No attempt has been made in this paper to discuss the diagnosis of breast carcinoma in detail, since the diagnostic features are universally well-known. The emphasis is placed upon the treatment.

2. The plea is made, however, that the surgeon make an earnest attempt to make a differentiation between benign and malignant lesions, on the basis of the clinical findings, in advance of the surgical procedure. If the mass is suspected of being malignant, a careful search should be made to determine the stage of progression, using both clinical findings and x-ray studies of the skull, chest, ribs, spine and pelvis.

3. All breast carcinomas are classified into five stages: A, B, C, D, and E. Stages A and B are potentially curable and should be treated by a combination of radical mastectomy and irradiation, either pre- or post-operatively. Stages C, D and E should be treated palliatively only, and radical mastectomy should never be performed upon patients in these latter groups, as the results are poor and the radical procedure may be falsely considered ineffective.

4. The operation of simple mastectomy should never be performed for early breast cancer. It should be used only as a palliative measure in advanced lesions, or supplemented by radiation or endocrine therapy.

5. There should always be close cooperation between the surgeon and the radiologist, working as a team to achieve a common goal, rather than as competitors.

6. Prolonged and thorough follow-up should be done on every patient with breast carcinoma; not for months, but for years. Periodic x-ray

examinations are of value, especially, from the standpoint of enchancing the patient's morale.

BIBLIOGRAPHY

(1) Haagensen, C. I., "A Technique for Radical Mastectomy", Surgery 19:1, January 1946.

(2) Low-Beer, B.V.A., Bell, H. G., et al, "Measurement of Radio-active Phosphorus in Breast Tumors in Situ: A Possible Diagnostic Procedure", Radiology, 1946, '47, No. 5.

(3) Farrow, J. H., and Woodard, H. Q., "The Influence of the Androgenic and Estrogenic Substances on the Serum Calcium in Cases of Skeletal Metastases From Mammary Cancer", J.A.M.A., 118:339, 1942.

(4) Adair, F. E., and Herrmann, J. B., "The Use of Testosterone Propionate in the Treatment of Advanced Carcinoma of the Breast, Ann. Surg. 123:1023, 1946.

(5) Herrmann, J. B., Adair, F. E., and Woodard, H. Q., "The Use of Testosterone Propionate in the Treatment of Advanced Carcinoma of the Breast; II. The Treatment of Osseous Metastases", Surgery 22:1, 101, July 1947.

(6) Herrmann, J. B., Adair, F. E., and Woodard, H. Q., "Effect of Estrogenic Hormone on Advanced Carcinoma in the Female Breast", Archives of Surgery, 1947, 54: No. 1, January.

(7) Herrmann, J. B., and Adair, F. E., "The Effect of Testosterone Propionate on Carcinoma of the Female Breast" — Soft Tissue Metastases", J. Clin. Endocrinology, 1946, 6: No. 6, Dec.

(8) Adair, F. E., "The Use of the Male Sex Hormone in Women With Breast Carcinoma, S. G. and O., 1947, 84: No. 4-A, April 15th.

(9) Geschickter, C. F., "Diseases of the Breast", second edition, 1945, J. B. Lippencott Company.

(10) Haagensen, C. I., and Stout, A. P., "Carcinoma of the Breast, Criteria of Operability", Ann. Surg., 118:1032, 1943.

(11) Quarterly Review of Surgery, Editorial Comment, November 1945, P. 68.

(12) Wolffson, S. M., and Hummon, I. F., "Pre-operative vs. Post-operative Irradiation in Breast Carcinoma — Results of a Five-Year Study" — In Preparation.

NEW DRUG, DEVELOPED SINCE WAR, ALLEVIATES MANY KINDS OF PAIN

A new drug, made available in this country after World War II, has been found effective in the alleviation of many kinds of pain, according to an article in the April 3 issue of The Journal of the American Medical Association.

The drug, which was given the non-proprietary name of methadon by the Council on Pharmacy and Chemistry of the American Medical Association, was originally prepared by German chemists and was known as drug 10820.

Writing in The Journal, Elizabeth B. Troxil, M.D., of the Department of Pharmacology of the University of Minnesota Medical School, says that in April 1946 clinical trials of the drug were instituted at the University of Minnesota Hospitals and that it was tried on 400 patients for relief of all types of pain.

Some of the conditions for which it was used to alleviate pain were: postsurgical, primary and metastatic cancer, arthritis, neuritis, headache, leg ulcer, anginal, pain, and gastric and duodenal ulcers.

The drug was administered orally — in capsules, tablets, and elixir — and by hypodermic and intravenous injection.

"Onset of action," the article says, "was two minutes when given intravenously, within 15 or 20 minutes when given hypodermically, or when given orally as the elixir, and 30 minutes when given orally in capsules or tablets.

"By all routes of administration it was found that the average duration of action was from three to four hours, with many of the patients obtaining relief for as long as eight to 12 hours."

One group of investigators found in experiments carried out on animals that the new drug had some of the characteristics of both morphine and merperidine. The effects on the nervous, circulatory and respiratory systems were similar to those of morphine.

Other investigators found that methadon was more potent than either morphine or merperidine.

Still another group observed the effects of methadon in former morphine addicts and found that the abstinence symptoms from morphine could be controlled with methadon. When methadon was withdrawn abruptly after prolonged administration, the symptoms were so mild that treatment was not necessary.

This method, Dr. Griggs discovered, brought about the most gratifying results yet attained in undulant fever treatment.

In addition to the high rate of cure and improvement, this latest therapy is applicable to nearly all cases of the fever and "is usually accompanied by symptomatic improvements, rather than unpleasant reactions."

However, the physician points out, a long time is required to complete the treatment, old people and those particularly sensitive to vaccine are particularly difficult to treat, and great care is required in both the handling and preparation of the serum.

Case Report

SOLITARY PYOGENIC ABSCESS OF LIVER

Report of a Case due to Anaerobic Streptococci Cured by Penicillin*

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Much has been written lately concerning the diagnosis, pathogenesis, and treatment of pyogenic abscesses of the liver as well as reports of proven cases being cured by medical and surgical measures. The mortality rate remains high, however, almost 100% in cases not submitted to surgical drainage. Penicillin promises to lower this mortality rate for us in both surgically and non-surgically treated cases.

A discussion of the diagnosis and pathogenesis of pyogenic abscesses of the liver is not within the scope of this paper, but it may be appropiate to note the routes of invasion of the liver by bacteria as commonly thought of. These are, in order of importance, (1) infections from areas drained by the portal system, (2) direct spread from adjacent body structures, (3) penetrating injuries, and (4) blood borne infections. In spite of this knowledge it is frequently impossible to locate the contributing focus of infection. This focus may be so small as a simple abrasion of the muscosal lining of any portion of the entire intestinal tract. However, on the other hand one may be reasonably certain of the portal of infection in the presence of, or recent history of acute appendicitis when symptoms and findings of pyogenic hepatic abscesses are present.

Practically all types of pyogenic bacteria have been reported to have been cultured from pyogenic abscesses. The most frequent ones found are Eschericha coli, staphylococci, and the non-hemolytic and hemolytic streptococci. Few reports are in the literature condemning the anaerobic organisms in this disease. In fact only three other such cases are reported.

One case reported in 1937[1] by McDonald, Henthorne, and Thompson revealed a pure culture of anaerobic streptococci from multiple abscesses of the liver found at necropsy.

St. John, Pulaski and Ferrer[2] reported, in 1942, a case of a solitary abscess of the right lobe of the liver from which a pure culture of anaerobic streptococci was obtained. The patient recovered after a two stage transperitoneal surgical drainage.

Michael and Wirth[3] reported recently a case of multiple pyogenic abscesses of the liver due to anaerobic streptococci. This patient was apparently cured with penicillin injections after surgical drainage and sulfonamides had failed.

CASE HISTORY

Chief Complaint: Headache, fever, and pain in his eyes for twenty-four hours.

Family History: Non-Contributory.

Past History: Patient had the usual childhood diseases without sequelae. No serious infectious diseases were noted. General health has been good until onset of the present illness.

Patient states that he was hospitalized while serving in the Philippine Islands for treatment of Dengue Fever and again for dermatopytosis of the feet. No history of malaria, dysentery, or other parasitic diseases common to the Pacific

No previous operations have been performed.

Review of System: Essentially negative.

*Case taken from the records at the 42nd General Hospital (Tokyo, Japan).

Present Illness: Twenty-year old white soldier was admitted to the 161st Station Hospital on 21 August '46 for treatment of fever, headaches, and pain in his eyes (photophobia) for twenty-four hours' duration. He had reported to "sick call" on the previous day for treatment of dermatophytosis of the feet with some ulcerations. He states that he felt "chilly", but noted no cough, chest pain, nausea, or vomiting. His bowels had been regular without diarrhea, blood or tarry stools being noted. There was no associated urinary urgency, frequency, burning on urination or flank pain.

Physical Examination: Temperature 103°. Pulse 114, Respiration 24, Blood Pressure 100/60.

General — Asthenic, white male quite lehtargic and complaining of severe headaches.

Head: Ear, Eye, Nose, and Throat. —essentially negative.

Neck: No meningismus, enlargement of thyroid gland or other abnormalities.

Lymphatics: No general glandular enlargement.

Chest: Normal body configuration with equal bitaleral expansion.

Lungs: Breath sounds are normal. Lungs are clear to percussion and auscultation.

Cardiac: Blood Pressure 100/60., Pulse 114. Precordium is quiet and no thrill can be felt. The heart is not enlarged to percussion. Point of maximum impulse is located in 5th interspace 8.5 centimeters to left of midsternal line. There is a soft systolic murmur heard over the apex, and it is not transmitted.

Abdomen: Muscle tonus is normal. No masses or tenderness can be elicited. Liver, spleen and kidneys are not felt. No flank tenderness to fist percussion is noted.

Inguinal — Negative.

Genitalia — Normal male configurations.

Rectal — No tenderness, masses or other abnormalities noted.

Extremities — There are several furuncles over the lower legs and buttocks. No lymphangitis or lymphadenitis present.

Neurological — Cranial nerves are intact. The motor and sensory systems are physiological.

Skeletal — No abnormalities are present.

Ascessary Clinical Findings: White blood cell count 19,300. No differential count was done. Blood smears were negative for malaria. Urinalysis showed specific gravity of 1.023, negative albumen, negative sugar, and the microscopic exam revealed 1-3 red blood cells per highpower field and few white blood cells. No casts were seen.

Course in Hospital: On the day following admission his temperature was 102 F and repeated blood count showed hemoglobin 90% or 13 grams, white blood cells 44,000, neutrophiles, 86%, lymphocytes, 11% and monocytes, 3%. Another blood smear for malaria was reported as negative. A large lumbar puncture was performed and the initial pressure was 240 milimeter of water with normal dynanics being obtained. The fluid was clear and the Pandy was negative. No cells were seen. Cultures were later reported as negative.

Physical examination on this day after admission was unchanged from the previous day. An x-ray of the chest was normal. A blood culture was taken and he was started on penicillin, 30,000 units every three hours. The blood culture was later reported as "no growth".

On the second hospital day his temperature ranged from 98⁴ F — 100² F. His penicillin was raised to 50,000 units every three hours. He appeared some better, but still complained of severe backaches.

On the third hospital day the patient had a mild shaking chill with a temperature rise from 97 F to101⁴ F. White blood cell count was reported as 29,000. The urine was given essentially negative.

On the fourth hospital day the patient complained of a sudden severe right upper quadrant and epigastric pain, aggravated by deep breathing. There was no associated cough or radiation of the pain to the back or shoulder. Examination revealed the heart and lungs to be normal. There was marked tenderness and moderately increased muscle tonus in the right upper quadrant. The liver was not palpable, nor was there tenderness over the liver. The possibility of a subphrenic abscess was entertained. His temperature ranged from 101° F. — 102⁴ F. His right lower chest pain was so severe at times to cause him to sit up in bed.

On the fifth hospital day an x-ray of the chest showing the diaphram and an x-ray of the abdomen were reported as normal. He developed an urticaria and this was thought to be due to penicillin, so this was discontinued. His white blood count was 22,200, red blood cell count 4,200,000.

hemoglobin 80%, lymphocytes 10%. The patient continued to complain of right upper quadrant pain and showed leukocytosis or fever, so he was transferred to the 42nd General Hospital on 28 August '46 via air evacuation.

Upon admission here his physical examination was essentially the same as previously recorded. His course continued to be that of a septic one with daily afternoon temperature rises to 102° F —103°F. An x-ray of the chest on 29 August '46 was again reported to be normal. Flat plate of abdomen revealed obliteration of the right psoas shadow, but the kidneys were clearly seen except along its medial border. On the 29th of August he was started again on penicillin, 50,000 Oxford units every three hours. Repeated films and fluoroscopy of the chest on 31 August '46 revealed marked limitation of motion of the right leaf of the diaphram as well as an inflammatory reaction above the diaphram.

The liver was not enlarged. Retrograde pyelograms of the kidneys revealed irregularity and fuzziness of the right superior calyx. This film was interpreted by the x-ray department staff as indicating a subphrenic inflammatory process.

Repeated urine examinations and cultures were negative. An electrocardiogram was within normal limits.

Repeated examinations revealed pain over the right upper quadrant and liver, anterior. Never was pain present in either flank. He continued to run a daily "spiking" type temperature and on 1st September his penicillin dosage was increased to 100,000 Oxford units every two hours. Twenty-four hours later his temperature "spike" was a maximum of 100° F. The following morning, the day of operation, his temperature was 98°F, and he had improved considerably clinically. There was some discussion among the staff members as to the advisability of proceeding with the surgical exploration. However, on September 3, 1946, the fourteenth day of his illness, exploration was done under spinal anesthesia.

Operation Record: The abdomen was prepared in the usual manner and draped in a sterile field. A right subcostal transverse incision was made and carried down to the peritoneum. By blunt dissection the peritoneum was deflected from the ribs. This was carried up over the dome of the liver to where an area of dense attachment of the liver to the diaphram was found in the anterior superior hepatic space. This was explored with the finger and a small intrahepatic abscess exposed. Approximately 4 cubic centimeters of nonodiferous purulent material were obtained. Further exploration of the superhepatic area revealed no further pathology. Because of the presence of a small rent in the anterior parital peritoneum visulization of the subhepatic area was possible and no further pathology was found here. The purulent material was removed from the abscess with applicators and sent to the laboratory for culture and examination. A cigarette drain was placed at the side of the abscess and brought out through the incision. The rent in the peritoneum was closed with continuous plain O catgut. The rectus muscle, anterior rector sheath, and subcutaneous tissue were all closed with interrupted cotton sutures. The skin was closed with interrupted cotton sutures. Sterile dressing was applied. The patient returned to the ward in good condition.

Comment: I, together with many other members of both the medical and surgical staff at the 42nd General Hospital, believe that in view of the clinical course and findings at operation this patient would have completely recovered without the benefit of surgical drainage. Five days before operation he was placed on penicillin 50,000 units every three hours in disregard of his previous urticaria which developed earlier in his disease. He continued to have daily "spiking" evening temperatures ranging from 102° F to 103° F. Thirty-six hours before operation this dosage was changed to 100,000 units every two hours and the evening before surgery his temperature failed to rise above 100°F. The following morning his temperature was 98°F, and there was some discussion among the staff members as to the rationale of exploration at that time.

At operation evidence of rather extensive pathology was encountered in the anterior, superior portion of the right lobe of the liver. A wide area of induration measuring approximately 7.5 centimeters in diameter was found and near its center a small abscess cavity containing about 4.0 cubic centimeters of non-foul purelent material was noted. Cultures of this material were reported as pure cultures of anaerobic streptococci. It was thought that this infectious process had already been brought under

control by the penicillin administered preoperatively. Penicillin in doses of 100·000 units every three hours was continued during the first five post operative days. This was then decreased to 50,000 units every three hours which he continued to receive for seven additional days in disregard of his afebrile course.

His postoperative course was that of a rapid and complete convalescense. During the first postoperative day his maximum temperature rise was 102°F. Thereafter, his temperature continued to fall gradually until on the third postoperative day he was afebrile and remained so. He was discharged on the eighteenth postoperative day.

SUMMARY

(1) A case of a solitary hepatic abscess due to anaerobic streptococci is herein reported.
(2) It is believed that this case represents a cure by penicillin alone.
(3) Three previous cases of hepatic abscesses due to anaerobic streptococci have been reported. One was found at necropsy two and one-half months following surgical closure of a perforated duodenal ulcer. Another one was cured by a two-stage transperitoneal surgical drainage, and the third was a case with multiple pyogenic abscesses of the liver cured with penicillin after sulfonamides and surgical drainage had failed.
(4) Penicillin, perhaps in massive doses, offers a brighter outlook in the future for pyogenic abscesses of the liver.
(5) This is the second case reported due to anaerobic streptococci to be cured by penicillin.

BIBLIOGRAPHY

1. McDonald, J. R.: Henthorne, J. C., and Thompson, L.: Role of Anaerobic Streptococci in Human Infections, Arch. Path. 23: 230-240 (June) 1937.
2. St. John, F. B.; Pulaski, E., and Ferrer, J. M.: Primary abscess of Liver Due to Anaerobic Non-Hemalytic Strep-Abscesses of the Liver, J.A.M.A. 133: 395-396 (Feb. 8) 1947.
3. Michel, M. L., Jr., and Wirth, W. R.: Multiple Pyogenic tococcus, Ann. Surg. 116: 217-222 (Aug.) 1942.

HOW ABOUT A CHIT-CHAT WITH YOUR MINISTER?

Commenting on some of the actions taken at the recent Ohio Pastors' Convention in Columbus on legislative matters affecting business, the bulletin of one of the state organizations representing a retail business group observed:

"We believe it is time businessmen, besides financially supporting the church, also enlighten their minister on the problems of operating a business today."

Judging from some of the public statements which have been made recently by some church men regarding medical and health questions, many of which indicated a lack of accurate information on such matters, physicians also should do a bit of missionary work among the clergy.

The pulpit can be a potent medium for the dissemination of facts or propaganda, depending on the belief of the minister and on how well informed he happens to be.

The Ohio State Med. Jl., May, 1948

SURGEONS DEVELOP NEW TECHNIC TO REMOVE FOREIGN BODY

Two Indianapolis doctors have developed a new technic for removing solid bodies lodged in the esophagus, the tube that leads from the throat to the stomach. The doctors are: W. D. Gatch and Molt.

Writing in the current issue of the Archives of Surgery, published by the American Medical Association, the doctors report the case of a man 46 years of age who swallowed his upper denture. They made a small opening in the stomach, passed an instrument upward into the esophagus, grasped the object and removed it through the stomach opening.

This method of removing solid bodies lodged in the lower part of the gullet, they explained, avoids the dangerous and often impossible methods of extraction through the mouth with forceps. This accident is especially dangerous when the object swallowed has sharp points.

Industrial Health

Committee On Industrial Health — Jos. H. Chivers, Chm., 836 S. Michigan Ave., Chicago 5, Frank P. Hammond, H. A. Vonachen, R. I. Barickman, C. O. Sappington, Milton H. Kronenberg.

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INDUSTRIAL HERNIAS

WILL F. LYON, M.D.
CHICAGO

Industrial hernias there are, but true traumatic hernias are rare. What is the distinction? An industrial hernia must be defined as one which satisfies the requirements of the workman's compensation act of the particular state in which the person is working, but it is not necessarily, and in fact is not usually, due to trauma; rather it is almost invariably congenital in origin. To be traumatic a hernia should be accompanied by at least some extravasation of tissue fluids, such as is found when a biceps muscle has been struck and its sheath ruptured, or a person's body squeezed severely and a tear made in the diaphragm. Most traumatic hernias occur in skeletal muscles and the diaphragm, almost never in the groin.

For the purpose of this discussion, only hernias of the groin will be considered, all others being comparatively rare.

Many hernias of the groin have been operated on within a day or two after their initial appearance; yet never are extravasated tissue fluids found unless there has been direct trauma, such as a severe contusion with actual tearing of some of the layers of the abdominal wall, or strangulation of the contents of the hernial sac.

What, then, is the cause of these hernias? Indirect hernias are the result of an incomplete obliteration of the peritoneum taken into the scrotum when the testicle descended. The failure of obliteration may be complete, and then there is a "congential" hernia, the sac extending all the way to and around the testicle. More frequently, part of the peritoneal pouch has been completely obliterated and the walls of the rest of the pouch merely stuck together, only to be separated, perhaps thirty years later, making the hernia suddenly become apparent. Occasionally at operation such sacs are found which have not yet been opened up. They may well be compared to the pockets of a physician's white coat which have been starched and ironed shut. As long as they are stuck together and empty they are inconspicious, but once something enters them, they become obvious. Direct hernias develop gradually through a congentially weak area in Hesselbach's triangle which is gradually thinned out and stretched by every muscular effort involving the abdomen; a few come through a sharply defined, small congential hole in the floor of the inguinal canal. A femoral hernia comes through a patent femoral ring or one whose closure is too weak to withstand the constant intra-abdominal pressure. The formation of the actual sac through this opening requires a long time, many months at least.

First of all, uncomplicated hernias are not disabling, and should not, therefore, constitute a cause for rejection in preemployment examinations. It is not the man having a hernia when hired who causes trouble, but rather the one in whom, though there was no evidence of a hernia when he was hired, one proceeds to develop while he is employed. Few awards have been made for

compensation on account of aggravation of a hernia which was present and noted at the time of employment, and still fewer for strangulation. The International Harvester Company has never made it a practice to refuse employment to persons with hernias, yet the company's experience with these employees has been so successful that not one cent of compensation has had to be paid by the company on account of aggravation of a hernia found to be present at the preemployment examination. Hernias may cause discomfort or acute pain at times, especially when they are enlarging rapidly, and at such times they may be temporarily disabling for a week or ten days. Trusses should be worn only if they give comfort and really keep the hernia reduced; otherwise they do more harm than good. Since trusses do not cure hernias, they are at best temporary stopgaps, and too frequently result in the postponement of surgical repair from the time when it is safe and easy to a time when conditions are far less favorable. The pressure of the truss may have become intolerable and the man's general condition not so satisfactory because of such factors as obesity, cardiac and renal damage with hypertension and, worst of all, a chronic and deep cough; yet in spite of these, surgical repair has become a necessity.

Few hernias strangulate, and the operative mortality even in these should be extremely low; hence hernias must be classed as benign lesions. This means that a surgeon must be convinced that he can keep his operative mortality almost to zero before he attempts the repair of these otherwise benign conditions. Also, the surgeon must try to keep his recurrence rate below 5 per cent if he is to justify his operations on hernias. The following observations are offered in the hope that they may be of assistance in satisfying these requirements.

An intimate knowledge of the anatomy of the groin is indispensable. Careful, atraumatic aseptic surgery and an open-minded technic to make the best use of the tissues available rather than to adhere rigidly to some predetermined type of repair will be of much assistance. The use of local anesthesia (1 per cent procaine hydrochloride with 2 drops of neo-synephrine to the ounce [28.3 cc.]) and cotton throughout will reduce both mortality and recurrences. Ordinary cotton thread size 40 for ligatures and 20 for sutures, is satisfactory. Obviously, the patient should be intelligently prepared, and this means the loss of several pounds, as well as inches of waistline if the patient is obese, especially if the hernia is large. Abdominal contents which have lived outside of the abdominal cavity for any length of time are not welcomed back home! Preoperative medication may well include administration of some barbiturate when local anesthesia is to be used. The procaine hydrochloride is injected first about 1cm. above the anterior superior spine of the ilium into the skin; then with a longer needle the external oblique muscle is pierced and the solution injected beneath, a fan-shaped area being blocked by tilting the needle to reach from the anterior superior spine high enough to block the lower fibers of the iliohypogastric nerve and to flood the ilioinguinal nerve. The needle is then run along just under the skin from the original point of injection to and around the pubic spine, plenty of procaine hydrochloride being left to anesthetize the skin along the line of incision. This whole injection should be carried out without touching the skin with the gloves, and immediately after the incision has been made towels and clips should be applied to keep the skin covered. At the outer end, the incision is now carried down to the external oblique muscle, and when this has been identified, is continued medially. If this procedure is not followed, the hernia and its contents may be cut into before the external oblique muscle has been reached. The external ring can now be identified and the external oblique muscle divided parrallel with its fibers from this to above the internal ring. The upper flap is gently lifted and freed so that it can be retracted; the lower flap is freed down to the inguinal ligament, which should be scarified by rubbing with gauze over the finger tip. The lower border of the internal oblique muscle will now be seen, and below it the cord; this should be lifted, procaine hydrochloride should be injected into it, and it should be carefully mobilized clear to the internal ring. The cord is then opened and searched for an indirect sac.

If an indirect sac is found in the cord, it should be dissected free and opened and explored with a finger, which assists materially in dissecting the sac free all the way to the parietal peritoneum, and this is absolutely essential. The

finger in the sac should be inserted into the abdomen to investigate the femoral ring to rule out a femoral hernia, and also to explore the floor of the inguinal canal from the inside. Then the sac, if narrow, may be transfixed, ligated high and amputated, but if its base is over 1 inch (2.54 cm.) in diameter, it is safer to place a purse string suture before ligating and amputating the sac. Obviously, one must be careful that bowel is not included in the ligature. If amputated high, the stump of the sac should immediately retract well up under the internal oblique muscle on being released. Anchoring it there is not only unnecessary but inadvisable. If there is no direct or femoral hernia, the only excuse to do more than close the wound and get out is to decrease the size of the internal ring, and this is usually necessary. Several interrupted mattress sutures between the transversus abdominis and the scarified inguinal ligament underneath the cord will accomplish this; usually four or five are used. A safe rule for the last suture is that it should be placed opposite the middle of the cord as it emerges from the internal ring, thus crowding the cord laterally a bit. The external oblique muscle is then closed, also under the cord, by interrupted sutures, and the skin by any method desired. Gentle pressure should be maintained on the wound for a few minutes to prevent bleeding from the puncture wounds of the cutaneous needle. Then silver foil and dry dressings are applied.

If a direct hernia is found, it should not be opened but should be invaginated by either a purse string suture or several mattress sutures, and the repair of the congenitally defective floor of the inguinal canal becomes the most important part of the operation. Conjoined tendons exist in textbooks but seldom in abdominal walls. If the red internal oblique muscle is carefully lifted, the white fibrous transversus abdominis will be found underneath, and it is this, plus the rectus, if necessary, which must be sutured to the scarified inguinal ligament by a series of interrupted mattress sutures underneath the cord. Care must be taken that each subsequent suture goes between different fibres of the inguinal ligament, or this may be pulled apart. If one is careful in conserving tissue, it will seldom be necessary to use fascia lata with a pedicle either under or over the inguinal ligament, or as a free transplant, to fill in a defect. McNealy has reported the use of a vitallium shield over the inguinal canal where there is need for additional tissue. The rest of the repair is the same as for an indirect hernia.

If a femoral hernia is found, the main part of the sac will be below the lower flap of external oblique muscle and under Scarpa's fascia, where it should be entirely freed. If it cannot be easily reduced, the sac should be opened, and if omentum is found this may be ligated in several sections and reduced; but if bowel is found and cannot be easily returned to the abdomen, the inguinal ligament may be cut. The femoral ring is best closed from above the inguinal ligament, this being sutured to Cooper's ligament by a mattress stitch or two. Care should be taken to protect the femoral vein from injury, and this is best done by exposing the vein well, then retracting it laterally before the suturing is done.

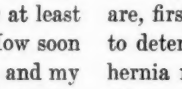
One other type of hernia of the groin must be mentioned, the so-called sliding hernia, partly because it is not uncommon and also because it requires a different method of disposition and, like the other hernias of the groin, cannot be definitely dignosed ahead of time. Since this is true, a surgeon should not attempt the repair of any hernia of the groin until he knows how to recognize and dispose of a sliding hernia. It is diagnosed only after the sac has been opened and the medial wall of the sac is found to be the mesentery of the bowel or other content of the sac. That is, mesentery has "slid" down through the hernial opening to form part of the sac. The point is that the contents of the sac cannot be reduced without reducing the sac itself. Obviously then, the sac cannot be amputated but must be turned in by purse string sutures. Usually, it is easier to turn in only about one third of the sac at a time, the last purse string being down to parietal peritoneum. From this point on, the repair is as previously described. Incidentally, this method of invaginating the hernial sac is a safe procedure in disposing of any hernial sac, where, for some reason, the sac does not lend itself to amputation.

After the operation, the patient should be encouraged to turn carefully at will, to have his back rest up as soon as desired, but certainly that same day, and to exercise all extremities, gently at first. Having him take his own bed bath and

elevating the head rest as he wishes assist in circulating blood through otherwise rather quiet veins. The patient should be up in a chair for a little while the next day after operation and should gradually increase his activities daily thereafter. Ordinarily, the dressing is not changed until the stitches in the skin are removed at the end of a week. By this time he may usually be discharged from the hospital and no further dressings should be required. On being released from the hospital, the patient should be instructed to spend his next two weeks just loafing at home, avoiding unnecessary strain—not using force during his bowel movements, for instance. After this two week period at home, he may begin to go outside each day, walking a little more right along until, at the end of a month, he is fairly active. A few patients can safely return to light duties six weeks after operation, but most will do well to spend an additional two weeks in getting back good muscle tone before resuming work, and it is important that these last two weeks be spent in actually regaining some of the muscular strength that was lost right after operation. Probably it is wise also to caution each man against unusual strain for at least six months after his return to work. "How soon can I drive my car?" is a frequent query, and my answer is in not less than two months, preferably three.

Finally, I shall say a few words regarding recurrences. Any hernia appearing in a groin previously operated on must be classified as a recurrence. This is mentioned because an analysis of my own recurrences shows that over half are actually cases in which multiple indirect sacs were present and missed at the first operation. These multiple sacs are not rare but are difficult to find until they have been distended by bowel, omentum or other contents. Over half of the rest of my recurrences have been direct hernias, coming alongside the cord as it emerges from the abdomen; few have come through just lateral to the pubic tubercle, and practically none through the strengthened floor of the inguinal cord. In repairing recurrences, it is usually wise to open up the entire groin by sharp dissection with a scalpel, and after this has been done, a satisfactory repair becomes gratifyingly easy. Interestingly enough, I have found my recurrence rate in recurrent hernias, whether mine or not, no higher than in the repair of primary hernias.

The injection treatment of hernias has again been rather universally abandoned as unsatisfactory from the standpoint of cures, especially in adults, and is not without a substantial risk. Among other factors contributing to this risk are, first, the fact that it is sometimes impossible to determine by physical examination whether a hernia really is reduced and, second, the impossibility of knowing for certain just where the tip of the injecting needle is after several previous injections have resulted in a variable amount of scar tissue.



The toxicity of streptomycin now appears to be sufficiently great to deny use of the drug to those patients who are making satisfactory progress under conventional forms of treatment. At present, most experienced physicians prefer to reserve the limited supply for patients more acutely ill, and especially for those in whom the disease has been progressive during recent months, and no other treatment is likely to be effective. Streptomycin is of no lasting or significant benefit to patients who apparently have hopeless, destructive types of pulmonary tuberculosis. H. McLeod Riggins, M.D. and H. Corwin Hinshaw, M.D., Am. Rev. Tbc., Aug., 1947.

The kaleidoscopic nature of tuberculosis, the sometimes bizarre effect of streptomycin upon it, and the fact that the drug at best merely supplements and does not replace accepted methods of treatment require that its use be confined to institutions for the treatment of the disease. The patient must have sanatorium care and all of the supportive treatment that tuberculosis has always required, along with collapse procedures and other necessary surgical methods. The drug merely supplements and does not replace accepted therapy. Henry Stuart Willis, M.D., North Carolina M. J., Nov., 1947.

News of the State

PERSONALS · COMING EVENTS · MARRIAGES · DEATHS

ADAMS COUNTY

Society News.—Dr. Walter Dayton Abbott, Des Moines, Iowa, addressed the Adams County Medical Society, April 12, on "Cartotid Arteriography in the Diagnosis of Introcranial Lesions."

BUREAU COUNTY

Society News.—Dr. John F. Pick, Chicago, clinical assistant professor of surgery, University of Illinois College of Medicine, discussed "What the General Surgeon Must Know About Plastic Surgery" before the Bureau County Medical Society at the Perry Memorial Hospital in Princeton, April 16.

COOK COUNTY

Awards in Medicine and Dentistry.—Four physicians and dentists from China, Iran, England, and Canada are included in the list of appointees who have been awarded research fellowships in medicine and dentistry by the University of Illinois graduate school.

The University has awarded a total of 10 fellowships, each carrying a stipend of $1,800 for one year of study. All but one of the appointees will assume their studies on July 1.

The appointees and their fields:

Dr. Joseph M. Kieley, Chicago, physiology; Dr. John Schwab, Philadelphia, Pa., physiology; Dr. Husang Javid, Teheran, Iran, surgery; Dr. Paul H. Jordan, Jr., Peoria, surgery; Dr. Isaac M. Berry, Chicago, clinical science;

Dr. Gordon Henninger, Baltimore, Md., internal medicine; Dr. H. T. Chang, Tietsin, China, internal medicine; Dr. Robert Hess, Wilmette, internal medicine; Dr. Ronald Emslie, London, dentistry; and Dr. Gordon Nikiforuk, Toronto, Can., dentistry.

Research Studies at Illinois.— At least 18 major research studies are in progress in the department of medicine at the present time, according to a survey conducted recently by Dr. M. H. Streicher.

The projects include the Navy studies in convalescence with Drs. R. W. Keeton, Warren H. Cole, and H. H. Mitchell as the principal investigators, aided by a large staff of cooperating faculty members.

The interests, at present, in this study are directed toward the measurement of the physical fitness of the patient before the operation, the effect of the operation on this physical fitness, and the time of his return to his previous physical fitness.

In another study, Mr. Robert Kyle is interested in synthesizing steroids which might have a bearing on salt excretion or retention. Mr. Kyle is associated with Dr. N. O. Calloway in the planning of this study which is supported in the form of a fellowship by the U. S. Public Health Service.

Drs. Aaron B. Kendrick, W P. Swisher, and R. A. Forrest are studying methods for the determination of mannitrol in the presence of high concentrations of glucose in the blood and in the plasma. Three others, Drs. Melvin M. Chertack, Luke J. Grimelli, and Helen L. Rhetta are studying the renal thresholds in diabetic patients, and the influence of hyperglycemia on tubular function and renal blood flow.

A major research project is the study of the influence of exposure of a patient to varying environmental conditions. This study is being executed by Mr. Nathaniel Glickman and Mr. T. Inouye, under the direction of Dr. Ford Hick. In another study in the department, Dr. I. R. Callen is following the effects of lowered oxygen concentrations on patients with hyperthyroidism.

Dr. Sophie J. Presley is conducting a research study on the maximal ventilation capacity of patients with various cardiac and respiratory diseases. Another, Dr. Anthony R. Sapienza is studying the influence of tilting patients on the electrocardiogram.

Mr. Glickman and Dr. S. E. Telser are studying the effects on nude subjects of variations in the moisture content (vapor pressure) of the air on water loss. These effects are in contrast to subjects who have a minimal amount of clothing. In this way, the effects of minimal amounts of clothing on the water loss by evaporation is being determined.

Dr. Streicher, aided by Miss Verna Pittard, is conducting a study on the clinical and bacteriologic

evaluation of insoluble ketones in chronic ulcerative colitis. They are also working on studies on diarrheas of pancreatic origin, including the evaluation of a new lipase.

Dr. Streicher also is cooperating with Dr. A. C. Ivy and Dr. Morton I. Grossman on the therapeutic analysis of enterogastrone in chronic ulcerative colitis, and the clinical evaluation of dibutoline in diseases of the gastro-intestinal tract.

Dr. Louis R. Limarzi and Dr. Jerry Paul are concerned with a study of blood and bone marrow in Hodgkins' disease which involves approximately 65 cases. Dr. Limarzi and Dr. Callen are investigating blood and bone marrow findings of anemia in kidney disease.

Dr. Carroll L. Birch is concerned with a study of coagulation of the blood, particularly hemophilia in the female. In another study, she and Dr. R. M. Jones are investigating the origin and significance of eosinophit.

Dr. Birch is working with Miss Betty Howard on two other problems. They involve a search in stool and blood for parasites in 24 of Dr. Ivy's rats, and the examination of stools from 20 veterans who served a year or more in the South Pacific.

Hematology Research Foundation Offers Two Fellowships for 1948-1949 Year.—The Hematology Research Foundation has issued an invitation for applications for the Ruth Reader Fellowship and the Robert L. Goldblatt Fellowship for research in blood diseases in the academic year 1948-1949.

The stipend for each fellowship is $1,500 per year with the option of renewal. The offer is made to any race, creed, or color, in the United States.

Applications closed April 16. The awards were to be announced by the Medical Advisory Council in May, 1948. Applicants were chosen on the basis of merit. The Medical Advisory Council, in charge of the project, includes Drs. A. C. Ivy, Louis R. Limarzi, and Otto Saphir.

Medical Research Seminars.—Michael Reese Hospital conducted a seminar on rheumatic fever and Sydenham's chorea, April 28. Dr. B. M. Kagan, a member of the hospital staff, conducted the program. These seminars are sponsored by the Research Institute of Michael Reese Hospital and are held, generally, on the last Wednesday of the month at 8 p.m.

Branch Meetings.—Dr. Danley P. Slaughter, assistant professor of surgery, University of Illinois College of Medicine, addressed the Northwest Branch of the Chicago Medical Society, April 16, on "Radical Surgery in Advanced Carcinoma."

Speakers before the meeting of the North Shore Branch of the Chicago Medical Society, May 4, included Dr. Arthur C. Curtis, head of department of dermatology, University of Michigan Medical School, on "Modern Treatment of Syphilis", and Dr. L. J. Wallner, assistant professor of otolaryngology, University of Illinois College of Medicine, on "Otological Effects of Streptomycin Therapy." The discussants were Dr. Erwin E. Peters, medical director, Chicago Intensive Treatment Center and Dr. P. W. Theobald, assistant in otolaryngology, University of Illinois College of Medicine.

Tuberculosis Agencies Merge.—Resources of the Municipal Tuberculosis Sanitarium and the Tuberculosis Institute of Chicago and Cook County were combined under a recent merger, newspapers report. The announcement was made jointly by Dr. Ernest E. Irons, president of the Municipal Tuberculosis Sanitarium board, and Herbert D. DeYoung, president of the Tuberculosis Institute. Under the new arrangement, the Institute will schedule assignments for all X-ray units operated by both agencies and the sanitarium will develop and study the films. Representatives of both groups will meet monthly for discussion so that uniformity of thought and purpose will govern the whole program.

Meeting of Urologists.—Dr. Irving J. Shapiro gave the presidential address before the Chicago Urological Society, April 22, at the Palmer House, Chicago, on "Psychogenic Factors in Urological Conditions." Other speakers included Dr. Julius M. Glasser, on "Marked Hypertension in a Child Relieved by Nephrectomy" and Dr. John A. Loef, on "Renal Decapsulation in Anuria Due to Sulfathiazole." The discussants were Dr. Benjamin M. Gasul, Dr. Knowlton E. Barber and William N. Wishard, Jr., of Indianapolis, Ind.

Grants for Cancer Research.—The University of Illinois has been awarded four grants totaling $51,130 for cancer research, teaching, and control by the National Cancer Institute of the U. S. Public Health Service.

Three of the grants have been designated for the college of medicine. They are stipends of $23,250 to be applied to a cancer teaching program, $16,880 for cancer research, and $6,000 for a study in cancer control.

A fourth grant, amounting to $5,000, has been awarded to the college of dentistry for a cancer teaching program.

The grants were announced by Oscar R. Ewing, administrator of the Federal Security Agency, Washington, D.C.

The American Cancer Society has awarded a grant of $18,935 to the department of pathology of the University of Illinois College of Medicine.

The grant will be used for an investigation of nucleic acids and amino acids in relation to cellular growth. Dr. Isidore Gersh, associate professor of pathology, will serve as the principal investigator.

The grant was approved on the recommendation of the Committee on Growth of the National Research Council.

French Physicians Awarded Fellowships.—Two French physicians have been awarded fellowships to take a 12-month postgraduate course in allergy

which will be offered next fall by the University of Illinois' colleges of medicine and pharmacy.

The physicians are Dr. Jean Dausset and Dr. Claude Lapresle, both of Paris. They will receive stipends from a fund established by an anonymous donor.

They were recommended for the fellowships by Dr. Hugues Gounelle, a consultant for American Aid to France, and Dr. Andre Lichtwicz, chairman of a military-medical mission to the U. S. in 1945. At that time, Dr. Lichtwicz designated the University of Illinois as the college to train French physicians in allergy.

Eight American physicians also will be selected for the course starting September 27. The 1948-49 course will be the fourth to be offered by the University of Illinois Allergy Unit.

New Officers Chosen by Urologists.—Dr. James W. Merricks was elected president of the Chicago Urological Society at its recent annual meeting; other officers are Dr. James I. Farrell, vice president, and Dr. J. S. Grove, 185 North Wabash Avenue, secretary-treasurer.

New Pressure Chambers for Human Experimentation.—Two low pressure chambers designed for human experimentation have been secured by the University of Illinois College of Medicine for installation in its new $400,000 Aero Medical and Atmospheric Institute.

The Institute, now under construction, will be used for the study of physical environment in health and disease. In addition, knowledge gained from research is expected to be of great value to military and civilian aviation.

The chambers were shipped to the University by the Air Forces from Middletown, Pa., via railroad. The larger chamber, capable of handling 16 men, is eight feet in diameter, 20 feet long, and weighs 29,000 pounds. A second chamber is designed for six-to-eight men.

The chambers will be used for numerous studies in aviation medicine. One of the studies will attempt to answer the increasingly important question of which patients should not be permitted to fly.

Other research will involve studies on adaptation to high altitude, the effect of small changes of barometric pressure on arthritic and rheumatic patients, the effect of high altitude on the senses of smell and taste in man, and studies on dynamics of hemorrhagic shock at high altitude.

The chambers are capable of lowering atmospheric pressures to give the equivalent of conditions encountered by pilots and passengers of aircraft flying at altitudes ranging from sea level to 40,000 feet.

Construction of the Institute was started last September, and is expected to be completed this fall. It will be located in the center of the campus quadrangle of the University of Illinois' Chicago Professional Colleges. The building will measure 146 feet by 55 feet, and will include a ground floor and a mezzanine at the first floor level.

Upon completion, the building will include a cold room in which temperatures as low as minus 60 degrees fahrenheit can be maintained, large and small cylindrical chambers for work with human beings, and five rooms for research.

Society News.—Dr. Philip Thorek, Chicago, presented the following papers at the Eighth Annual Western Colorado Spring Clinic in Grand Junction, Colo., April 3-4: "Surgery for Advanced Carcinoma" with motion picture demonstration, "Vagotomy" with motion pictures and "Surgical Abdominal Emergencies."—Dr. J. P. Greenhill, Chicago, delivered the Samuel and Minnie Good-Friend Memorial Lecture at the Lebanon Memorial Hospital, New York, on "Recent Advances in Obstetrics and Gynecology".

Personal.—Dr. Max Thorek addressed the Homer G. Phillip Hospital Interne Alumni Association, Washington University School of Medicine, St. Louis, Mo., April 23, on "Cholecystectomy: Its Technical Variations."—Dr. Carroll L. Birch is currently making a motion picture entitled "Animated Hematology Bone Marrow." The silent one-reel picture will show the embryology of bone marrow, normal findings and pathology of bone marrow. The bone marrow will be shown by photomicrographs.

Personal.—Dr. Louis R. Limarzi has been appointed a member of the committee on exhibits of the International Society of Hematology which will hold its first meeting at Buffalo, N. Y., August 23-26. He also has been appointed a member of the steering committee for the clarification of terminology of cells and diseases of the blood and blood forming organs of the American Society of Clinical Pathologists.

KANE COUNTY

Personal.—Dr. Walter A. Schimmel, Dundee, who was recently discharged from the Army Air Force as Lieutenant Colonel after serving forty-four months, has opened his office at 511 Oregon Avenue. Prior to entrance into military service, Dr. Schimmel practiced in Arlington Heights.

MACON COUNTY

Society News.—Dr. Carlo S. Scuderi, professor of orthopedics, University of Illinois College of Medicine, addressed the Macon County Medical Society, April 27 in Decatur on "Common Problems in Treatment of Fractures."

Cancer Clinic Starts Speaker Series.—The Cancer Diagnostic Clinic has heightened the interest in its sessions by adding a clinical pathological conference, the first of which was on March 18. At this first of the meetings to be held monthly at Decatur and Macon County Hospital, local doctors led the discussion of the general problem of diagnosis of malignancy. Dr. Clyde H. Tearnan opened on the subject of surgical diagnosis, Dr. Milton E. Rose with the medical diagnosis, and Dr. W. C. Smullen

with the x-ray diagnosis of carcinoma. Dr. Robert Haan presented a specially chosen case. Dr. Wilbur C. Wood presided. The conference was followed by a consideration of the cases referred to the diagnostic clinic by other doctors.

The new plan, organized by Dr. Arthur L. Ennis for the American Cancer Society, will continue monthly. Every three months a guest speaker will head the clinical pathological conference and discuss the particular phase of the cancer problem in which he specializes. At a well attended meeting at 10:30 a.m., April 15, Dr. Herbert Schmitz, Loyola University School of Medicine, discussed "Carcinoma of the Cervix and Uterus." The meeting was followed by a courtesy luncheon at the hospital.

Portrait Issue of Bulletin.—The Macon County Medical Society devoted its April bulletin to a reproduction of portraits of its membership. Unfortunately, at the time the issue went to press, the photographs of thirteen members were not available. Most of the portraits were made in January 1948 by the Joseph Merante Studio of New York City at the request of the Illinois State Medical Society.

The 1948 list of the Macon County Medical Society includes eighteen names which have been added in the past year. Eight others have been removed. A statistical breakdown of the present 109 members shows that they include twelve physicians who are retired. Six others are in institutional types of medicine. Of the remainder, 82 doctors are actively practicing in Decatur and nine in outlying towns. Not listed are the several physicians from adjacent counties who are on the associate staffs of Decatur Hospitals. Further calculation will show that Macon County has 91 practicing doctors for its estimated 90,000 population, or approximately one physician for each 1000 residents.

MARION COUNTY

Physicians Honored.—The reunion of two local physicians, Drs. H. O. Williams and F. M. Edwards, both of Centralia, with two other classmates, Drs. W. R. Mangus, Bridgeport and J. S. Templeton, Pinckneyville, was a feature of a meeting recently in the home of Dr. and Mrs. Williams. The physicians and their wives were guests at a luncheon marking the fiftieth year of their graduation from medical school.

Dr. Edwards and Dr. Williams are the first physicians in Centralia to become members of the Fifty Year Club of the Illinois State Medical Society. A special celebration was held at the Langenfield Hotel and the presentation was made by Dr. Andy Hall, Mt. Vernon, president of the Fifty Year Club. Speakers at the affair were Drs. Harry E. Ryan, Centralia, toastmaster, and Dr. Irving H. Neece, Decatur, then President of the Illinois State Medical Society.

PEORIA COUNTY

Fifty Years in Medicine.—Three physicians of Peoria were awarded the Fifty Year medals and certificates indicating their memberships in the Fifty Year Club of the Illinois State Medical Society at a meeting of the Peoria County Medical Society, April 13. The physicians are Dr. Roland L. Green, past president of the Illinois State Medical Society, Dr. A. S. Plummer and Dr. W. T. Marrs. The presentations were made by Dr. Irving H. Neece, Decatur, then president of the Illinois State Medical Society, and Dr. Harold M. Camp, Monmouth, Secretary. Additional honor was the presentation to each of the physicians of a key of the Peoria County Medical Society by Dr. Fred Maurer, president. Dr. Orville Barbour was toastmaster at the dinner. The three physicians graduated at the College of Physicians and Surgeons, St. Louis. Drs. Green and Plummer were graduated in 1898 and Dr. Marrs in 1894. The latter has practiced in Peoria for forty-eight years.

PERRY COUNTY

Dr. Templeton Honored.—Dr. J. S. Templeton, who graduated at the College of Physicians and Surgeons in St. Louis fifty years ago, was presented with the Fifty Year Medal at a special meeting of the Six-County Medical Society recently. Dr. Templeton has been practicing in Perry County for all of his fifty years. The presentation of the Fifty Year Medal was made by Dr. Andy Hall, Mt. Vernon. Dr. Templeton is a past president of the Illinois State Medical Society.

RANDOLPH COUNTY

Joint Meeting.—A joint meeting of the Randolph County Farm Bureau and the Randolph County Medical Society was held April 28 at the Dreamland Cafe, Sparta. The following speakers appeared on the program: Dr. W. W. Fullerton, Secretary, Randolph County Medical Society, on "Organization and Distribution of Medicine"; Dr. Carl F. Mees, Randolph County Farm Advisor, on "Agriculture and Its Relation to Public Health"; and Dr. G. Cleveland Otrich, Belleville, on "Soil, Food and Nutrition". The feature of the meeting was the presentation of the Fifty Year Pin and Certificate to Dr. B. J. Stevenson and Dr. H. Le Saulnier.

ROCK ISLAND COUNTY

Life Memberships.—Life memberships in the Rock Island County Medical Society were granted to Drs. E. A. Soule, East Moline, and F. H. First, Rock Island, at a meeting of the society, April 13. The society also recommended that the two physicians be granted emeritus membership in the Illinois State Medical Society. Dr. R. T. Tidrick, Iowa City, addressed the meeting on "Newer Treatment of Advanced Burns."

SCHUYLER COUNTY

Personal.—Dr. Harold M. Camp, Monmouth, Secretary, Illinois State Medical Society, addressed the Rushville Rotary Club, April 22 at a dinner meeting, on "Medicine: Yesterday, Today and Tomorrow?"

WHITESIDE-LEE COUNTY

Joint Meeting.—The Whiteside-Lee County Medical Societies were addressed at a joint meeting, April 12, at the Sterling Public Hospital, by Dr. Rexford Finegan, assistant medical director of the Metropolitan Life Insurance Company of New York, on "Life Insurance Examinations and Recent Life Insurance Statistics."

VERMILION COUNTY

Physicians Honored.—Drs. O. W. Michael, Muncie, and J. H. Williamson, Dixon, were inducted into the Fifty Year Club of the Illinois Medical Society at a meeting in Danville, April 7. The two physicians received gold pins and certificates. The presentation to Dr. Michael was made by his son, Dr. Oscar J. Michael. Dr. Williamson received his pin and certificate from his son, Dr. Holland Williamson.

GENERAL

Annual Alumni Election.—Dr. Michael H. Streicher was installed as president of the Medical Alumni Association of the University of Illinois at the organization's annual luncheon recently at the Palmer House. Dr. Streicher is an associate professor of medicine at the University of Illinois. Dr. Frank Lee Stone was selected as president-elect. Other officers elected to serve one-year terms were Dr. Edward A. Christofferson, first vice-president; Dr. Walter J. R. Camp, second vice-president; and Dr. Walter Simmonds, necrologist. Dr. George D. Stoddard, University of Illinois president, and Dr. A. C. Ivy, vice-president in charge of the Chicago Professional Colleges, were guests at the luncheon.

Fraternity Luncheon.—The Phi Rho Sigma Fraternity reserved the Chicago Yacht Club, foot of Monroe Street, for their A. M. A. luncheon on Wednesday, June 23. Reservations have been made for 125. The local committee in charge of this meeting consists of Dr. Robert M. Graham, Dr. L. W. Peterson and Dr. Howard B. Carroll.

Personal.—Ben Kiningham has been appointed executive secretary of the Illinois Tuberculosis Association.

Navy Research Unit Moves.—The navy is moving its medical research unit from Dublin, Ga., to Great Lakes Naval Training Center, according to the Chicago Tribune, reported April 14.

Health Association Chooses Officers.—At a meeting of the American Student Health Association held recently in Chicago, Dr. Herbert A. Ratner of Loyola University was elected president of the Illinois regional division of the national association. In addition to his position as director of Loyola's student health service, Dr. Ratner serves as an associate professor of medicine at Loyola University School of Medicine.

Others elected to office were: Dr. E. B. Erskine, University of Illinois (Navy Pier), vice-president; Dr. William G. Beadenkopf, University of Chicago, secretary-treasurer; and Dr. Arnold Wagner, Northwestern University, and Dr. Thomas D. Fitzgerald, Illinois State Normal, members-at-large for the executive committee.

Illinois Bacteriologists Honor Dr. Huddleson.—The Society of Illinois Bacteriologists conferred its first annual award for outstanding contributions to the science of bacteriology on Doctor I. Forest Huddleson, Professor of Bacteriology, Michigan State College, East Lansing, Michigan. The award was presented to Doctor Huddleson at a meeting of the Society on Friday, April 30, at the Museum of Science and Industry in Jackson Park.

Doctor Huddleson is well known throughout the world for his contributions in bacteriology. He was born in Kentucky. He received his bachelor's degree in chemistry and bacteriology at Oklahoma A. and M. College. He then studied at Michigan State College where he received the degrees of M.S., D.V.M., and Ph.D. He entered the army during World War I as a private and rose to the rank of Captain at the time of his discharge. In 1940 he received the American Veterinary Medical Association's International Veterinary Award. In 1944 he was honored with the Borden Award of the American Veterinary Medical Association. His studies have centered around brucella infections in man and animals, and he is recognized as a world authority in this field. He has published two books and more than 150 scientific papers on brucella infections. The Society of Illinois Bacteriologists is composed of 448 members in the State of Illinois, and includes nearly every professional bacteriologist in the state. It was organized in 1935 as a branch of the national organization known as the Society of American Bacteriologists.

The purpose of the Society's award is to give public recognition to some person residing in the middle west who has made an outstanding contribution to the Science of Bacteriology. The Award was inaugurated in 1948 and will continue to be given once every year in the future.

HEALTH DEPARTMENT ACTIVITIES

New Low Maternal Death Rate. — The loss of maternal life from the complications of childbirth in Illinois in 1947 was at a rate of 1 for every 1,000 babies born alive, the lowest maternal death rate in the history of the state, according to a vital statistics report released today by Dr. Roland R. Cross, state director of public health. Although the total number of births in Illinois in 1947 increased by more than 12 per cent over the previous year's figures, 192,247 as against 170,921, the number of maternal deaths stood at 198 as compared with 229 in 1946.

The report also reveals a saving in infant lives during the year. Deaths among babies under one year of age declined from a rate of 30.3 per 1,000 births in 1946 to a rate of 28.8 for last year. All causes were responsible for 92,371 deaths in Illinois in 1947, an increase of 4 per cent over the 1946 figures. Heart disease and cancer were mainly responsible for the higher mortality, each causing a sharply greater number of deaths. Especially significant in the report is the 7 per cent reduction in mortality from tuberculosis, the death rate for the year reaching a new all-time low of 33.6 per 100,000 of the population. The number of deaths from this disease declined from 2,954 in 1946 to 2,760 last year. While the number of fatal accidents of all kinds was up slightly, 5,275 in 1947 as against 5,259 in the previous year, the 1947 death rate was actually lower, 64.2 per 100,000 population as compared with 65.5 in 1946.

Water Treatment Plants. — A ten weeks course in the operation of water treatment plants, sponsored by the state department of public health, opened April 22 at the Southern Illinois University in Carbondale. Covering such subjects as epidemics, laboratory tests, care of mechanical equipment and other phases of waterworks operation, sessions will be held once a week for a period of two hours. There is no tuition fee for the course, which is open to any superintendent or operator of a water treatment plant in southern Illinois. This short course is a part of the department's program to promote efficient and safe operation of municipal water plants.

Diagnostic Examinations. — During the first three months of this year 3,573 residents of Illinois received free examinations at 19 state-aided cancer diagnostic clinics, Dr. Roland R. Cross, state director of public health, reported recently. Of this group, 1,007 persons were entering the clinics for the first time and 2,566 patients were returning for follow-up examinations.

These clinics, which have been established by the state department of public health, offer free consultation service to any Illinois physician in the diagnosis and treatment of cancer patients. Any person who has symptoms suggestive of cancer may arrange through his family physician for admission to any one of these centers.

In emphasizing the magnitude of the cancer problem in Illinois Dr. Cross pointed out that mortality from cancer was at a rate of about 37 per day in the state last year. Cancer deaths for the year totaled 13,402 as compared with 12,847 in 1946, an increase of about 4 per cent.

"Although mortality from cancer continues to increase year by year, records from cancer treatment centers show that the disease can be cured in many cases if it is discovered early enough and treated promptly with surgery, radium or x-ray," Dr. Cross concluded.

"For The Common Good"

Mrs. Walter Stevenson, Quincy, was recently named co-chairman of the Illinois Statewide Public Health Committee of which Mr. Benjamin Wham, Chicago, is chairman. She was named to the position by Governor Dwight H. Green.

Villa Stiles of the Chicago Industrial Health Association was in the Chicago office recently conferring on proposed health publication of the association.

Dr. and Mrs. D. C. Good, Danville, visited the Chicago office recently to discuss a proposed speaker for the Vermilion County Medical Society's Woman's Auxiliary.

At the Decatur Postgraduate Conference of the Seventh Councilor District, March 25, guests of Dr. Irving H. Neece, then president of the Illinois State Medical Society, were Mrs. Lindy Thompson, R.N. Mrs. Sadie Castle, and Miss Violet Sargent, R.N., all assistants of Dr. Neece.

Lectures Arranged Through the Educational Committee of the Illinois State Medical Society; Charles P. Blair, Monmouth, Chairman:

Howard L. Alt, Chicago, Leukemia Research Foundation at Congress Hotel, May 22, on "Leukemia Research."

W. W. Bauer, Director, Bureau of Health Education, American Medical Association, Chicago, Peoria Kiwanis Club in Peoria, June 16, "Growing Old Gracefully."

Carlos I. Reed, Ph.D., Northwestern University Dental Alumni Association in the Gilmore Auditorium of the Dental School, Chicago, June 15, "Diet and Nutrition."

The Educational Committee also arranged the following Youth Week Lectures for the Chicago Medical Society and the Chicago Board of Education; all physicians are of Chicago:

W. W. Bolton, McKay School, April 23, Health as a Hobby.

Benjamin Kaplan, Hayt School, May 10, Health as a Hobby.

Minnie Perlstein, Tuley High School, May 11, Care of the Skin.

Hyman Gordon, Drummond Elementary School, May 11, Keeping Your Body Fit.

W. K. Gottstein, Sherwood School, May 12, Tempers and Tantrums.

C. Edward Stepan, Funston School, May 12, Tempers and Tantrums.

W. W. Bolton, Mason Elementary School, May 13, Health as a Hobby.

Mary G. Schroeder, Bryant School, May 13, Health and Personality.

Julius Richmond, Froebel School, May 13, Keeping Your Body Fit.

Harry H. Boyle, Hale School, May 13, Tempers and Tantrums.

Edmund G. Hess, Mitchell Elementary School, May 14, Health and Personality.

Morris Braude, Earl School, May 14, Health and Personality.

Robert E. Lee, Greene Elementary School, May 14, Health as a Hobby.

Robert R. Mustell, Brainard School, May 14, Health as a Hobby.

Frank G. Murphy, Florence Nightingale School, May 14, Health as a Hobby.

Lectures Arranged Through the Scientific Service Committee of the Illinois State Medical Society; Robert S. Berghoff, Chicago, Chairman:

James H. Hutton, Chicago, Morgan County Medical Society in Jacksonville, May 13, "Endocrine Aspect of Hypertension."

F. Garm Norbury, Jacksonville, Fulton County Medical Society in Canton, May 20, "Psychosomatic Medicine."

Edward W. Cannady, East St. Louis, Marion, Clinton, and Washington Counties Medical Society in Centralia, June 17, "Treatment of Congestive Heart Failure."

William M. McMillan, Chicago, Will-Grundy County Medical Society in Joliet, June 24, "Surgical Treatment of Hypertension."

Norbert C. Barwasser, Moline, McDonough County Medical Society in Macomb, September 24, "Diagnosis and Treatment of Common Skin Diseases."

Postgraduate Conference Arranged Through the Postgraduate Education Committee of the Illinois State Medical Society; Robert S. Berghoff, Chicago; Chairman: For the Sixth Councilor District (Adams, Brown, Cass, Pike, Scott, Morgan, Calhoun, Greene, Jersey, Macoupin and Madison Counties), with the Madison County Medical Society acting as host at a luncheon at the Mineral Springs Hotel, Alton, June 3, with Dr. F. Garm Norbury, Jacksonville, presiding as Councilor. Participants were:

Thomas D. Masters, Springfield, Management of Diabetes During Pregnancy and Surgical Complications.

Wayne W. Flora, Chicago, Diagnosis and Treatment of Anal Fissue.

Joseph N. Rappaport, Evanston, Behavior Problems of Early Childhood.

Philip Thorek, Chicago, Pre and Postoperative Therapy.

Claude N. Lambert, Chicago, Principles of Fracture Treatment.

Walter F. Dillon, Chicago, Cancer of the Cervix and Endometrium.

Frederick H. Falls, Chicago, Antepartum Hemorrhage.

Percy E. Hopkins, Chicago, Illinois Prepayment Medical Care Plan.

The evening dinner speaker will be Dr. Harold M. Camp, Monmouth, Secretary, Illinois State Medical Society, "Necessity for Cooperative Program in Providing Medical Care."

DEATHS

EDWARD CUNAT, Chicago, who graduated at Rush Medical College in 1900, plunged to his death from the Presbyterian Hospital where he had been a patient for five days, April 7, aged 72.

JOHN NELSON ENGLISH, Gillespie, who graduated at Missouri Medical College, St. Louis, in 1893, died in St. Francis Hospital, Litchfield, January 4, age 81, of pneumonia.

DAVID J. EVANS, retired, Aurora, who graduated at Rush Medical College in 1898, died April 7, aged 76, of coronary thrombosis. He had been on the staffs of the St. Charles, Copley and St. Joseph Hospitals of Aurora and was an emeritus member of the Illinois State Medical Society.

EDWARD CARLIN FERGUSON, Edwardsville, who graduated at Jefferson Medical College of Philadelphia in 1896, died of a heart ailment, March 26, aged 75. He was a member of the "Fifty Year Club" of the Illinois State Medical Society.

WILLIAM RUDISEL FRINGER, retired, Rockford, who graduated at Northwestern University Medical School in 1888, died March 7, aged 84. He was a past president of the Winnebago County Medical Society, a member of the "Fifty Year Club" of the Illinois State Medical Society, and the Chicago Ophthalmological Society.

LEWIS L. JACKSON, Vienna, who graduated at Loyola University School of Medicine in 1916, died in the Metropolis Memorial Hospital in Metropolis, January 12, aged 64, of pulmonary embolism following an automobile accident on Christmas Eve.

EVERARD T. LARK, Columbia, who graduated at St. Louis University School of Medicine in 1902, died suddenly of a heart attack, April 20, aged 68. He had practiced medicine for 40 years, the last 27 of which were in Columbia.

THOMAS P. O'CONNOR, Chicago, who graduated at John A. Creighton Medical College, Omaha, Nebraska, in 1914, died March 25, aged 56. He was an associate in otolaryngology at Northwestern University Medical School and attending otolaryngologist at Wesley Memorial Hospital.

RALPH E. POTTER, West Point, formerly of Quincy, who graduated at Bennett College of Eclectic Medicine and Surgery, Chicago, in 1913, died in an automobile accident April 5, aged 65. He had served as head physician at the state hospital at Bartonville and

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was on the medical staff of the Illinois Soldiers' & Sailors' Home in Quincy before he moved to West Point.

MARY GERTRUDE SLAUGHTER, Chicago, who graduated at the University of Illinois College of Medicine in 1920, died April 20, aged 60. She was a dispensary physician at the Municipal Tuberculosis Sanitarium since 1926.

JAMES W. TWITCHELL, retired, Belleville, who graduated at Marion-Sims College of Medicine, St. Louis, in 1898, died March 11, aged 78. He had practiced medicine and surgery in Belleville until he retired 15 years ago.

S. A. WARE, Springfield, who graduated from Meharry Medical College, Nashville, in 1899, died January 8, aged 74.

WARNING ISSUED ON CONTAMINATED DEXTROSE SOLUTION

A warning to all physicians and hospitals to check their stocks of Cutter's dextrose and saline solution bearing code number CM 8164 was issued today in an editorial which will appear in the May 1 issue of The Journal of the American Medical Association.

The editorial states in full:

"On April 19 the Headquarters of the American Medical Association received a wire from Dr. W. F. O'Donnell Jr. of Hazard, Kentucky, reporting serious reactions in two patients immediately following the intravenous use of five percent glucose in normal saline manufactured by Cutter Laboratories, Berkeley, California. The American Medical Association immediately notified the Food and Drug Administration of these facts and a nationwide investigation by Federal and State regulatory officials was launched. Not all of the facts are yet available but the following information justifies a warning to all physicians and hospitals.

"At least two and possibly four deaths have occurred in Miami, Florida; Lexington and Louisville, Kentucky, following administration of Cutter's dextrose and saline bearing code number CM 8146. At least eight other serious reactions have been reported, mostly from southern communities. Several hundred one liter bottles with this code number are unaccounted for and the firm's shipping records are so incomplete as to make it impossible to trace and recover all of the outstanding material quickly. Although the contaminant has not been identified, it appears to be a heavy growth of bacteria or mold. Many of the unopened bottles show a distinct cloudiness.

"Physicians and hospital officials are urged to check their stocks for this code of five percent dextrose in saline, and if any is found to hold it and notify the nearest office of the Food and Drug Administration which is working at top speed to recover all outstanding material. The Food and Drug Administration requests that none of this product be destroyed in order that an accurate check on the extent of recovery of this dextrose solution can be made.

"This unfortunate incident again emphasizes the necessity for prompt notification of the American Medical Association and the Food and Drug Administration of any suspicious or unexpected reaction following the administration of a drug. Quick action by Dr. O'Donnell in notifying the Association of the reactions in his patients has no doubt saved the lives of many other persons. As yet Cutter Laboratories has offered no explanation of why this contamination was not detected before the product was distributed. The medical profession is entitled to know the facts in this case and to be assured that the drugs they purchase are safe."